

**NEW HAVEN
RAILROAD**

*Operating
Instructions*

**EP 5 Class
Locos
370 -- 379**



RAPIDO

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PRODUCT GUIDELINES

Thank you for purchasing this model of the one of the most iconic electric locomotives of all time, the New Haven Railroad's EP-5.

If this is your first Rapido locomotive, we must ask – why is this your first Rapido locomotive? No seriously, we've been around now for a long time now, and we're not just a Canadian company, eh? We've produced an imperial ton of US products, like the New Haven FL9s and coaches, Amtrak F40s and Cabbages, RDCs, FA-2s, RS-11s, etc. So just for that, we're going to make sure you LOVE your EP-5. And then you'll say to yourself, "What have I missed out on all these years? I need to find and buy every Rapido model that has ever been released, in every scale!

If you are a returning customer, welcome back! Just put your engine on the track. All we ask is you don't intentionally set it on fire, don't use it on a daredevil stunt off the layout, and don't MU it to anything made by Tyco. Oh, and REALLY keep it away from cheap DC controllers. Crappy power packs can quickly and easily give any Rapido locomotive an unwanted makeover...

If this is your first Rapido Manual, we should warn you up front - there's usually a good amount of humor through these manuals. Well, at least we think so. We have gotten some e-mails from people that don't agree, but we suspect that they have no sense of humor. After all, model railroading is supposed to be fun!

As always, if there is anything amiss with your EP-5 please do not hesitate to contact us. We stand by our products 100%. The best way to contact us is through email (trains@rapidotrains.com) but you can also reach us by phone, the postal service or Messenger Pterodactyl as well. Our contact info is near the back of this manual.

However, PLEASE do not send a faulty model back to us without first getting authorization. You wouldn't believe how many times we get a delivery of a broken locomotive with only a name inside (sometimes only the FIRST name), meaning we have no idea what's wrong with it! (By the way, if your name is Bob and you sent in an FL-9 in 2008 – your FL9 is still sitting on the shelf in our bathroom.) If the issue with your model is something simple – like a loose grab iron – then we'll likely tell you how to fix it yourself. While we generally will support repairs to your EP-5 for a considerable length of time, please realize that eventually the parts supply will run out. That, or the oxygen on this planet will. Whichever comes first, unfortunately that will dictate when we can no longer help you. Again, please make sure you contact us first so we can tell you whether there's enough parts (or oxygen) left to do your repair.

EP-5 DCC FUNCTION QUICK REFERENCE

- | | | | |
|------------|------------------------------------|------------|--------------------------------|
| F0 | Headlights | F11 | Heavy Load |
| F1 | Bell | F12 | Switching Mode |
| F2 | Hancock Air Whistle | F13 | Pantograph #1 Up/Down |
| F3 | Flange Squeal | F14 | Pantograph #2 Up/Down |
| F4 | Dynamic Brake | F15 | Handbrake Apply/Release |
| F5 | Doppler Hancock Air Whistle | F16 | Emergency Brake |
| F7 | Dimmer | F17 | Coupler Clank |
| F8 | Startup/Mute/Shutdown | F18 | Number Boards (On/Off) |
| F9 | Compressor | F19 | Switch Flange |
| F10 | Brake Set/Release | | |



LOK SOUND
EST. 1999

Sound-equipped Rapido models feature ESU Loksound V5 decoders. For more information, please visit www.esu.eu.





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PROTOTYPE HISTORY

The New York, New Haven & Hartford Railroad was a pioneer and leader in overhead high-voltage A.C. electrification, eventually having 152 route miles and 673 track miles under wire. From the junction with the New York Central at Woodlawn, New York all the way to New Haven, Conn., mainline tracks, branch lines, sidings, yards, industrial spurs, and even roundhouses had catenary wire strung up. Nothing like it had ever been done before, and it remained the largest railroad electrification in the USA for years. Plans were made by the New Haven to string wire all the way to Boston, but a depression, war, and bankruptcies prevented it.

What made New Haven passenger electrics unique was not only did they have to run on 11KvAC collected from the overhead catenary, but also on NYC's 600vDC 3rd rail in order to gain access to Grand Central Terminal (GCT) in New York City.

By the 1950s, the New Haven's remaining passenger electric locos (called "motors" by crews) were showing their age. In order to have more reliable and up-to-date power, the New Haven ordered ten locomotives from General Electric. These would be their fifth passenger electric (classed EP-5 and numbered 370-379), with the only stipulation given to GE that they be ignitron rectifier equipped and 4000Hp.

The new locomotives features diesel-type three-axle trucks of a completely unique design. A box body with streamlined ends was designed and a large box of accelerating resistors mounted on the roof. With intake screens located under the pantographs, a large blower was mounted in each nose and would automatically go into high speed when the 35-notch throttle was moved past Notch 6. Combined with the resistor box fans, these blowers made a howling sound not unlike a Boeing 707 on take-off, and thus the EP-5 motors were dubbed "Jets".

Before the first EP-5 could be delivered by G.E., management change came to the New Haven when flamboyant Patrick B. McGinnis became president in 1954. After being horrified at the proposed green or even brown EP-5 paint schemes, Pat's wife Lucille suggested that perhaps something more stylish ought to be chosen. McGinnis agreed, saying, "Why just paint something when for another nickel you can make a thing look good." Graphic designer Herbert Matter (the designer of the stacked NH logo) was retained to design a new paint scheme. His design featured large horizontal stripes with geometric shapes at each end. The only decision left was the choice of the accent color; either red-orange or bright yellow. G.E. painted 370 in red-orange and 372 in bright yellow to test both schemes. They invited Mr. & Mrs. McGinnis along with Mr. Matter to view them at the G.E. plant in Erie, Penn. Matter said that while the yellow was fashionable, he was concerned about keeping it clean while Lucille said that the red-orange left a more powerful impression. The New Haven now had its soon-to-be-famous corporate colors. The one and only yellow EP-5 was rolled back into the G.E. paint shop and repainted into red-orange, having never left Erie.

The ten new EP-5 motors were delivered in early 1955 with the first official revenue run taking place on March 24, 1955. Being the first pieces of equipment to be painted into the "McGinnis scheme", they were a colorful shock to the staid no-nonsense sensibilities of employees and the public alike.

After about a year in service, in 1955 all ten units were returned to G.E. at Erie for modifications. This included adding rectangular side vents in the red-orange stripe area to prevent overheating the interior space. Also, they provided some relief from the overpressure of the car body caused by the blowers. As built, when a compartment door at the back of the cab was opened, anything loose in the cab would be blown out of open windows and doors!

Unfortunately for the EP-5 fleet, electric operation was seen as a cumbersome left-over from the steam era and that dual-mode diesels like the FL9 were the future. As such, the EP-5 units were not maintained to a high degree with three of them being out of service by 1961 when the New Haven





entered its final bankruptcy. Skirting was removed to ease access to the underside tanks. The trustees took over and realized that electrics were cheaper to run than diesels, and quickly rebuilt all ten EP-5s in 1962-1963. The cash strapped New Haven then used them on mail & express trains as well as piggyback freight. Money for maintenance was getting quite scarce. By the time of the New Haven's merger with the Penn Central on January 1, 1969, four of the EP-5s were derelict again and were soon scrapped in 1972.

The remaining six shouldered on with the Penn Central, first getting re-numbered into the 4970s and reclassified as E-40. Repainted in 1970 into the all-black PC scheme, they remained in GCT commuter service until only three were left in 1972. After a fire in 4971 under GCT on May 29, 1973 that blocked the entire evening rush, all of them were banned from the terminal. In 1974, the last two were re-gearred for freight service with 4973 and 4977 losing the 3rd rail gear and getting single pantographs. Used on freights, mail trains, and in helper service on the Harrisburg line, they actually made it to Conrail's April 1, 1976 starting date although never getting re-lettered. One was retired by the end of 1976 with the last making it to 1977 before being condemned. They and the remaining derelict units were scrapped in May 1979, bringing an end to the last of the New Haven's passenger motor fleet.

BREAK-IN

Just so we're clear, that doesn't mean break into anyone's layout room to steal their EP-5. And don't break into a hobby shop either because that is really frowned upon. Just buy more for yourself. This isn't about that kind of break-in.

Every locomotive needs a break-in period. Your EP-5 has been tested at our factory for about two minutes ... maybe ... just to make sure everything functions as it should. That is certainly not enough time to get the gears to mesh nicely or to even out any jerky operation in a new motor. We suggest that, after reading this manual, you put your EP-5 on a test loop and just let it run in each direction for an hour or two. Fast and slow. Don't have it pulling anything either while you're breaking it in.

There already should be enough grease in the gearbox so you don't need to add any. Just let the thing run. If you are running this thing on track on the carpet, please vacuum first. You have no idea how many models come back to us with gearboxes full of carpet fluff and pet fur. Our models are not cat-proof.

HOW TO HOLD YOUR EP-5

Hold your EP-5 gently, and with much love, care and attention. After all, this project took us a LONG time to complete!

The EP-5 has numerous delicate parts, especially on the roof and underframe. Because of this, it is best to pick it up with your fingers along the bottom edge of the body. That way, you won't leave greasy fingerprints on the sides, but you also won't stress any of the delicate parts. Give particular care to the pantographs as you don't want to bend them as doing so may cause them to jam when operating.

If you are taking your EP-5 to the club all the time and regularly handling it, stuff will likely break off. Sorry. The little bits are made of plastic and metal with glue, which is all a bit fragile. We attempted to make the small parts out of unobtainium and use Steady-State Micro Welding to install them. Unfortunately, with the current global crisis, unobtainium has become unobtainable.

We suggest wrapping your EP-5 in a plastic bag before placing it in the packaging or in your holder so you can catch bits that fall off. White glue is the recommended adhesive for reattaching the bits, although you are welcome to use CA, but only if you are very careful and very brave.





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CHECKING AND ADJUSTING YOUR LOCOMOTIVE

We try and make sure that every locomotive is perfectly up to spec before it leaves the factory, but if it was a Monday night and our factory workers were placing bets on last night's football game between Taiwan and Singapore rather than assembling models, there may be a couple of bugs. Doing a quick pre-service check will solve most operational glitches.

- Check to see that all wheelsets are correctly in gauge using an NMRA RP-2 Standards Gauge. Should any of the wheelsets be out of gauge, then remove the affected wheelset from the truck by prying off the bottom lid of the gearbox with a small flat screwdriver and then spreading apart the sideframes. The wheelset can be regauged by grabbing each wheel and twisting. Reverse the steps to replace the wheelset, and ensure the gearbox cover is snapped into place before placing it on the track.
- Check that all underbody piping and appliances are firmly installed and clear of the track. Of particular note are the air hoses on the ends of the locomotive and both coupler trip pins. Bend up any low coupler trip pins so they don't interfere with your switches and crossings. We recommend using Kadee part #237 (Trip Pin Pliers) or Micro-Mark part #80600 (Trip Pin Bending Plier). If your track transitions from flat to a 12% grade in three inches, you might also want to cut off the pilot and the fuel tank as they will foul the rails. Have you ever considered roller coaster modeling? That might be more your style.
- Make sure that the trucks swivel freely and without binding. If they catch on anything, check to ensure that the ends of the trucks don't bind against the steps. If they do, see that everything is firmly installed.

MISSING OR DAMAGED PARTS

If you open your EP-5 box and discover that something has obviously been bumped in transit and is damaged, please contact us. If a part has broken off, the easiest way to reattach it is with a drop of white glue. You can't ruin the paint finish with white glue. If you don't like to touch your model trains, you are welcome to send the engine back for us to glue that doodad back on with white glue. Of course, more parts may break off in transit back and forth.

We try to make our models courier- and mail-proof, but there really is no way to protect a model from damage when it is used in a game of football at the UPS or FedEx distribution center. Model trains generally don't survive well after being "spiked" because Bobby scored a touchdown near the warehouse receiving doors.

More information about our limited warranty can be found towards the end of this manual.

REMOVING THE SHELL

If you need to open your EP-5 to install a crew or a decoder, things should be pretty straightforward and easy. To get inside your EP-5, you will need to follow these steps:

- We recommend that you only attempt opening up your locomotive in a zero-gravity environment. That way, if a part does break off, it will just be suspended there, right where you broke it, ready for you to





reinstall it. If you don't have a zero-gravity chamber, then we suggest not installing shag carpet in your workspace. Yes it looks great and yes it feels great on bare feet, but whatever detail bits fall into shag carpet are gone forever. No questions, it's not coming back. The only way to find it is to walk barefoot and hope that it impales your foot in the most painful way possible. And if you decide to use this method to find the missing parts, you're not covered by our health plan.

- To remove the shell, remove the screws from the coupler boxes and slide the coupler boxes out from the frame. Set these aside. Now carefully spread the body sides out away from the chassis. There are four clips (two on each side) that engage slots in the chassis. It may help to install toothpicks by each tab to help hold it open apart while you work on the others. If you are working in a zero-gravity environment then the chassis will slowly drift away from the shell. On the other hand, if you are not in a zero-gravity environment; remember – gravity sucks. If you hold your loco upright the chassis will now plummet to the nearest solid object. Hopefully that is not a concrete floor. You may want to do this carefully over your workbench with some foam or a cloth underneath. To help tether the body to the chassis we have installed plugs that connect the pantograph motors to the circuit board. You'll need to unplug these to completely remove the shell.
- If you want to install a crew inside your EP-5, the cab is secured to the body shell by 2 clips – one on each side. Gently spread the body side or pry on the tabs with a flat screwdriver to release them.

To re-install the body, read the bit above backwards. Oh, and don't forget to re-connect the pantograph plugs before installing the shell. If you forget then the pantographs won't work. Don't ask how we know.

OPERATION – DC (SILENT)

— WARNING —

Rapido products are designed to operate safely between 0V and 16V. Voltages in excess of 16V - as well as irregular waveforms, voltage spikes or short circuits - may cause severe and sometimes irreversible damage to the product. "Train set" power packs are known to suffer from any one of these unexpected irregularities, whereas higher-end systems have safeguards in place to prevent this. Rapido always recommends using a power supply system that matches the quality of the models you are running. If you're reading this, you've obviously invested in top-of-the-line, museum-quality motive power and equipment, so we hope you've made the same investment with your model railroad power supply too.

While many power supply systems exist, some are known to have caused problems with model train circuitry in the past. If you have any one of the following systems, please do not use it until you contact us for more information: MRC RailPower 1300/1370-series, Bachman Spectrum Magnum, Atlas 313 Universal Power Pack.





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If your EP-5 locomotive is not equipped with a sound decoder, it should function like most other HO scale locomotives. Put it on the track. Give it some juice. Watch it go. In DC, the number boards are always on and the headlights are directional. All other lights – including class lights – are indeed wired in, but they will not work in DC.

If you are new to the hobby (or just like to occasionally “play trains”) and you have a DC-powered train set, please contact us before operating your EP-5 as it may not be safe (for your engine and/or your wallet) for you to use your controller.

If you use a train set throttle or a throttle designed for large scale trains, your locomotive’s circuitry may end up looking like a microwave dinner forgotten after you accidentally punched in an extra digit into the timer. In such situations, we’ll try our best to fix it for you, but it may be beyond salvaging. Please note we may have to charge you for the replacement parts and/or the labor involved in restoring it to its former self. That’s because you didn’t read this bit of the manual.

INSTALLING A DCC DECODER

If you bought an EP-5 DC model and want to add a decoder, please note that the DC models do not have the necessary electronics and hardware to have operating pantographs. You can still install a DCC decoder to get full sound and lighting functions, but your pantographs will remain manually operated. Adding the operating pantographs is a fairly involved process, and we offer this as an upgrade service through our warranty department only. You will have to send your model back to Rapido to have this done. Please contact us in advance for details BEFORE shipping the model back.

The EP-5 contains a motherboard specially designed for our decoders. This is connected to the track, motor and lighting outputs. A blind plug is attached to the motherboard using a 21-pin connector. To install a decoder, remove the blind plug and install a 21-pin decoder. Your chosen decoder should have eight function outputs.

At the time of writing, we recommend only the following 21-pin decoders:

- ESU #59029 - LokPilot 5 Basic with 21MTC
- ESU #59529 - LokPilot 5 DCC with 21MTC

The 21-pin connectors are perfect for this application because there are enough pins to ensure that all your lighting functions are connected. Also, it just plugs right onto the circuit board. All of the necessary resistors are included on the loco’s circuit board so you don’t have to futz around with resistors. Just plug in one of the recommended decoders and you have DCC. We know some of you prefer a different brand of decoder, but we honestly can’t help you install it or map the functions.

We have made a EP-5 function mapping which can be downloaded onto ESU decoders (59029 or 59529) so that the function buttons and motor control are exactly the same as our factory-released sound versions. This should be available for download from the Support section of our web site. If it isn’t, bug us. An ESU LokProgrammer is the easiest way to write the function mapping to the 59029 or 59529 decoders. If you don’t have a LokProgrammer, you can adjust CVs in the usual way.

We will be selling EP-5 sound decoders separately; if they aren’t on our web site by the time you read this, contact our office. And yell at us. AActually, it’s probably better to be nice. There’s enough negativity in the world today. Just remind us to get on it. We will. Eventually.

OPERATION – DC (SOUND)

To operate your sound-equipped EP-5 locomotive on a DC layout, just give the throttle some juice. The engine sounds will start up once sufficient voltage has been reached (around six volts). Once the start up sounds have completed the loco will start moving. See the note above (in Operation – DC





(Silent)) about using train-set or large-scale throttles. Note that with DC layouts, you have very little control over the sounds of your model.

On DC the normal DCC functions are limited. For example, the headlight will come on and reverse, but the pantographs will both stay down. The only way to fully enjoy all of the DCC functions on this model is to upgrade to DCC control.

It is usually at this point in the manual that Jason liked to insert a gentle dig at his fellow modelers who won't switch from DC to DCC. The rest of the staff have worked hard to remind him what happened the last time he did that. Something about being chased down the county highway by a group of townfolk wielding pitchforks and flaming torches. As long as we can keep reminding him of this event, he'll be nice to DC modelers. But sometimes we forget. We apologize in advance to anybody that might be insulted. We really have very little control over him.

Some throttle manufacturers produce special gadget-like thingies which are meant to trigger the functions in locomotives on DC layouts. As we have no involvement in the development of those gadget-like thingies, we have absolutely no idea how they will affect your EP-5, for good or for ill, for richer or poorer, in sickness and in ... sorry, wrong transcript. As always, we'll try to help you fix your EP-5 if one of these gadget-like thingies turns your locomotive's circuitry into something akin to burnt toast, but we can't guarantee we'll be able to.

OPERATION – DCC (SOUND)

We go to extreme lengths for accuracy, in sounds as well as in looks. Our sound decoders are LokSound V5 decoders by ESU, programmed with correct sounds from original EP-5 recordings. So you can rest assured that the sounds are bang-on accurate. (Actually, we may have used an old vacuum cleaner as they sound much the same as a "Jet". We won't tell).

More detailed decoder instructions, including all sorts of weird CV settings we don't understand, can be found in the ESU LokSound V5 decoder manual. It is available for download from the support section of our web site or directly from the ESU website.

LOCOMOTIVE ADDRESS

Your EP-5 comes from the factory with a decoder address of 3. We suggest if you are using DCC control that you first test that the locomotive responds on address 3 to all functions – motor, lights, sounds, everything. Once you have verified that the locomotive is responding you should, then assign it a unique address (normally the road number of the unit) before going any further. This can be done either on your programming track (recommended) or on the main if your system supports programming on the main. Be aware that if you do program the locomotive on the main and you have any other locomotives assigned to address 3 (the normal default address for new locomotives) that ALL of them will also be changed to your new address!

Note that some DCC systems get a little wonky when programming sound-equipped locomotives on the programming track because of the high current draw. If weird stuff happens, try programming on the main.

TURN ON THE SOUND

Press F8 and you will first see the rear pantograph raise up for the overhead wire - you DO have overhead wires, don't you? Then you'll hear the EP-5 startup sequence followed by the sound of the blower fans. Your locomotive won't start running until the compressors have pumped up the brakes and the blower fans have come on. (You can adjust CVs to allow the locomotive to start moving





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before the startup sequence has played out. Refer to a full ESU LokSound V5 decoder manual for more information. You can now download it from the Support section of our web site. The feature is called the "Prime Mover Startup Delay" and is Section 13.2 on Page 89 of the ESU LokSound V5 manual). Press F8 again to turn the sound off. The loco will power down and the rear pantograph will lower.

If you start the loco in silent mode, then press F8 when the locomotive is already moving, it will skip the startup and the sound will just turn on.

Note that if you are listening to your EP-5 idling (well, roaring) nicely and then you select another engine, your locomotive still thinks F8 is pressed so it will keep idling along. However, if someone else selects your locomotive's number and F8 isn't pressed on their controller, the EP-5 will promptly shut down. They will need to press F8 again.

SOUND VOLUME SETTINGS

The sound volumes on your decoder have been pre-set at the factory to levels that we found comfortable on our test tracks. In a large building. Sound levels are very much a matter of personal taste (especially if you are showing signs of advanced deafness like we are), and what sounds great in one layout environment may sound **WAY TOO LOUD** or too soft in another. Fortunately, the sound levels can be easily adjusted to best suit your own requirements and we recommend that you experiment with different settings if you don't care for the default levels.

To adjust the volume levels go into the program mode on your DCC system (refer to your system's manual for instructions on how to do this); enter the desired CV number; then enter the desired levels. Note that this can be done either on a programming track or on the main (ops mode) if your DCC system supports programming on the main.

We strongly recommend that you keep notes on which settings you have changed and which values were used. You can use the handy chart at the top of the next page. If you ever need to do a reset on the decoder (see "Factory Reset" below) then having good notes will allow you to easily re-enter any changes that you wish to keep.

— VERY IMPORTANT —

Before you manually change any of the volume control CVs, you must set CV 31 to 16 and then CV 32 to 1. CV 31 and CV 32 are used as index selection registers and if you don't set them first, unspeakable things may happen to your unit. You must set the CVs every time before changing any volume CV settings.

Or just get a LokProgrammer. No, we will not teach you how to use it!

EP-5 SOUND VOLUME SETTINGS

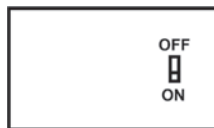
Function	CV	Default	Range	Your Value
Master Volume	63	192	0-192	_____
Prime Mover	259	128	0-255	_____
Horn	275	200	0-255	_____
Bell	283	90	0-255	_____
Dynamic Brake	299	110	0-255	_____
Doppler Horn	339	200	0-255	_____
Brake Set/Release	339	75	0-255	_____
Curve Squeal	435	60	0-255	_____





PANTOGRAPH OPERATION

The operating pantograph function only works in DCC on DCC/Sound equipped locomotives. If you want the pantographs to operate there is a small switch on the bottom of the loco. The models are shipped with the switch in the "Off" position. This disables the pantographs so that you won't rip them off at the first low bridge if you don't have overhead wires. To enable pantograph operation, flip the switch to the "On" position first.



The normal operating practice on the New Haven was to have the rear pantograph raised. This means that when the train reached it's destination and the locomotive changed direction for the return trip then the raised pantograph would change ends.

On your model there are two ways to change which pantograph is raised, The simplest, and the one that requires no thought, is just to change direction. The headlight will swap ends, both pantographs will go up, then the (new) front pantograph will go down.

Of course, if you are doing any switching with your EP-5 (if you are we do make some really nice switchers that might work better in that role) then the Incredible Dancing Pantograph Show might become tiresome. In that case you can put both pantographs up manually using F13 or F14. Using these functions will keep the pantograph raised regardless of direction.

FUNCTIONS

The EP-5 has a number of pre-programmed functions, as listed below. If you have a DCC system that only allows eight functions, you can remap the functions following the guidelines in the ESU LokSound V5 manual, which can be downloaded from the support section of our web site. Or you can upgrade to a newer DCC system, which may be less stressful. Of course, if you don't like where we put a particular function you can also re-map the functions using a LokProgrammer.

- F0 Headlights**
- F1 Bell**
- F2 Hancock Air Whistle**
- F3 Flange Squeal**
- F4 Dynamic Brake**
- F5 Doppler Hancock Air Whistle**
- F7 Dimmer**
- F8 Startup/Mute/Shutdown**
- F9 Compressor**
- F10 Brake Set/Release**
- F11 Heavy Load**
- F12 Switching Mode**
- F13 Pantograph #1 Up/Down**
- F14 Pantograph #2 Up/Down**
- F15 Handbrake Apply/Release**
- F16 Emergency Brake**
- F17 Coupler Clank**
- F18 Number Boards (On/Off)**
- F19 Switch Flange**





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FUNCTIONS: MORE INFORMATION

F0 HEADLIGHT

Unlike the real thing, our EP-5 headlight is directional. It leads the way no matter which way you're going. If you want the both to be on regardless of direction, then read a little further on under the Switching Mode function.

F1 BELL

Pressing F1 rings the bell. We have provided two slightly different bell sounds so that you can add a little variety to your huge fleet of EP-5s. You DO have a huge fleet of EP-5s, don't you? You can change between the bells by setting CV162 to either 0 or 1.

F2 HORN/WHISTLE

The EP-5s carried Hancock air whistles throughout their service lives. They are NOT a horn (at least according to many New Haven fans)! Try it, they sound neat! No, this isn't a steam whistle. Really. Like with the bell we have provided two slightly different sound files for the horn... er... whistle. You can change between them by setting CV163 to either 0 or 1.

F3 FLANGE SQUEAL

Do you have a cat? Do your neighbors have a cat? Do you want to see something really neat? Press F3 to turn on the Curve Squeal sound and watch them jump! This replicates the sound of a train rounding a tight curve, but half of the frequencies are just out of range of human hearing. Works equally well on dogs. Press F3 again to turn it off.

F4 DYNAMIC BRAKE

Press F4 to get dynamic brake sounds. Who does that? Well apparently a lot of people because once upon a time, we got flak for putting it in the upper tiers of functions on our old locomotives. So for that, we apologize and have brought it to the forefront of functions for your acoustic pleasure.

F5 DOPPLER HORN.... ERRR... WHISTLE

You can play this when approaching level crossings or any other whistle post. The doppler is nicely timed for a moderately paced train blowing for a level crossing.

F7 DIM THE HEADLIGHTS

When approaching a station stop or an oncoming train, press F7 to dim your lights as you don't want to blind your passengers or the oncoming train's engineers. Not dimming your lights is a direct violation of what's commonly referred to as "Rule 17". The internet can answer all your questions about said rule.

F8 STARTUP/MUTE/SHUTDOWN

Press F8 and you will first see the rear pantograph raise up for the overhead wire (assuming that you have turned the pantograph function on using the switch underneath). You DO have overhead wires, don't you? Then you'll hear the EP-5 startup sequence followed by the sound of the blower fans. Your locomotive won't start running until the compressors have pumped up the brakes and the blower fans have come on. (You can adjust CVs to allow the locomotive to start moving before the startup sequence has played out. Refer to a full ESU LokSound V5 decoder manual for more information. You can now download it from the Support section of our web site. Look for "Prime Mover Startup Delay" in Section 13.2 on Page 89).





If you start the loco in silent mode, then press F8 when the locomotive is already moving, it will skip the startup and the sound will just turn on.

Press F8 again to turn the sound off. The rear pantograph will lower and the loco will run through the power down sound sequence.

If your pantographs aren't working (in DCC) double check the position of the on/off switch before contacting our warranty team. Otherwise the first thing that they will ask you to do is check the position of the switch...

F10 BRAKE

F10 works just like the brakes on a real engine. Press F10 and you put on the brakes. Turn off F10 and the brakes come off so you start moving again. Note, if you walk away for a few minutes, then come back and your train will not start no matter how hard you twist the throttle, quickly double check that the brakes are released (F10 is not selected). This can eliminate a lot of head scratching and swearing. Don't ask how we know, we're just happy to pass on the tip.

F11 HEAVY LOAD

Pressing F11 makes your EP-5 sound like it's working harder to pull a long train. This will also increase the amount of time that it takes you train to accelerate to speed.

F12 SWITCHING MODE

If you press F12, the headlight and rear light will both be on dim. This is appropriate for switching operations, which would be common in yards and terminals. This is the only way to turn on both the front and rear headlights at the same time. Press F12 again to turn off the switching mode and return to your regularly scheduled lighting. Again, we do make loco models more suitable for switching than an EP-5, but hey, it's your railroad.

F13/F14 MANUAL PANTOGRAPH OPERATION

If you want to keep one pantograph (or both) raised, regardless of direction of travel, use F13 and F14. Each controls one pantograph.

F15 APPLY OR RELEASE HANDBRAKE

Press F15 and listen to the sound of the crew winding the handbrake on or off.

F16 EMERGENCY BRAKE

Activating F16 brings your train to a screeching halt. Literally.

F17 COUPLER CLANK

Activates a coupler clank sound to replicate coupling onto a train

F18 NUMBER BOARD LIGHTS

The front number boards normally on. To turn off the number boards, just press F18.

F19 SWITCH FLANGE

If the Flange Squeal sound wasn't enough for you (or if you really enjoyed it and want more) try hitting F19 when you go over a switch. It will activate the sound of your loco crashing over the switch frog.





RAPIDO

FACTORY RESET

On your EP-5 you can perform a factory reset by entering a value of “8” into CV 8. Note that this will cause all of your new volume and motor settings to be lost, so you will need to reprogram any settings that you want to keep. What do you mean, you didn’t take any notes? WE JUST TOLD YOU TAKE NOTES. If we had a band, you’d be kicked out of it.

Despite what you may have heard, you can NOT lose all of the pre-recorded sounds on your EP-5 decoder by doing a factory reset.

AWESOME SLOW SPEED THINGY

There is an awesome trick that you can use to get even better slow speed running and smoother operation. It’s called the Automatic Motor Tuning Feature. This feature will automatically adjust the Back-EMF in most cases and give you phenomenal slow-speed performance. After you have allowed the model to break in as directed, WE HIGHLY RECOMMEND YOU DO THIS FOR ALL YOUR ESU-EQUIPPED RAPIDO ENGINES.

In order to use this automatic adjustment, you need to use Ops mode programming, i.e. programming on the main. Make sure your locomotive is in “forward” and that you have lots of room in front of it on your mainline. You may have to set up pylons or a work block to keep other errant model railroaders from entering your territory. Set CV 54 to a value of 0. Then get out of programming mode and then (we’ll say this again: Make sure you have plenty of room in front of your locomotive and it is not headed for the layout edge) turn on the bell (press F1).

Your EP-5 will quickly take off at full speed and suddenly stop. If you had previously installed an HO scale crew without HO scale seatbelts, you may want to dispatch an HO scale ambulance to attend to the injured. After that, you’ll have fabulous motor control. If you’re not entirely happy with the results, try it again. By the way, if you ever have to reset your locomotive, you can do the automatic adjustment thingy again – it just takes a few seconds. Just remember to install the seat belts if you haven’t already.

MORE INFORMATION

While addressing the features that most modelers will need for normal operation, these instructions have covered just a small number of the many customizable features of your ESU LokSound decoder. For advanced users who want to more fully explore the capabilities of the decoder we suggest downloading the ESU LokSound V5 decoder manual. This is available in the Support section of our web site.

LIMITED WARRANTY

We will do our best to solve any problems or issues that you may have with your EP-5 locomotive. If your locomotive has any defects that originate from the factory, we will repair your locomotive using new components or replace it outright should a repair not be possible. However, we can only replace your locomotive while we have additional ones in stock. While we would love to have an infinite supply of spare parts and do our best to keep as many on hand as possible, eventually these will run out too. In some cases, future productions of the same locomotive may result in a parts supply being restocked, but that is not always guaranteed. If you are like most of us and – after purchasing this locomotive – you put it on the collection shelf under the darkest corner of your layout and are now just discovering it 30 years later after your friend at the club ran theirs, then you are on your own if there are any issues.

There are a number of things that this warranty cannot cover. If your EP-5 arrives with a couple of





loose grab irons or underbody bits, there is a very good chance that you can affect a repair in less time and effort than it would take to contact us. Don't be afraid to do some model railroading! White glue works wonders for securing all sorts of parts and will not mar or damage your paint. However, if parts are missing that is another story – contact us directly through our website or give us a call and we'll send you some replacements.

If catastrophe does strike – even as the result of your own actions (or possible inactions) – and your locomotive gets damaged, please give us a shout and we'll do our best to help you out if possible. Don't be shy.

ACKNOWLEDGEMENTS

The EP-5 project was one that really pushed the limits and took Rapido into a new market. Never had we produced an electric locomotive before, and bringing it to market means that we have had to call upon some experts for their input.

Thanks go to: Rick Abrahamson, Paul Cutler, Wayne Drummond and John Sheridan.





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