

SW1200
SWITCHING LOCOMOTIVE
OPERATING
MANUAL



SW1200 LOCOMOTIVE PRODUCT GUIDELINES

Thank you for purchasing this model of the quintessential NORTH AMERICAN road switcher, the SW1200. This is the ULTIMATE SW1200. Hours of research have been poured into the design. We are certain you will not be disappointed.

If this is your first Rapido locomotive, we have to ask – where the heck have you been? We've been producing models JUST FOR YOU for the last thirteen years and you've ONLY NOW finally noticed our advances? Just for that, we're going to make sure you LOVE your SW1200. And then you'll say to yourself, "What have I been missing all of these years? I want to buy every Rapido model that has ever been released, ever, in every scale! Especially that weird British one that tilts and looks a bit rude!" So we're thanking you in advance for that.

If you are a returning customer, just put your engine on the track, don't MU it with a Tyco F-unit, and don't burn it up with a cheap DC controller. Really – we'll take MUing it with a Tyco F-unit over using a cheap DC controller. Cheap DC controllers can turn Rapido models into Molotov Locomotives.

We would like to warn you that this manual contains a considerable amount of inappropriate linguistic innuendo, including four éclairs, two crevasses and a penguin. Noot Noot. But as these naughty things only appear in that one sentence, you don't have to worry about them any more.

As always, if there is anything amiss with your SW1200 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 reach us by phone, Canada Post or Messenger Yak as well.

Please do not send a faulty model back to us without first getting authorization. If you bought this model in 2020 (eh, let's forget 2020...2021), stuck it under your layout, abandoned model railroading to start a Messenger Yak farm, and have finally returned to the hobby at the ripe old age of 173, we're most likely dead. Use your Molecules "R" Us 4D Repromatic to replicate any part that doesn't work. In fact, just program it to build your entire layout. Due to planetary overcrowding, your layout is restricted to the size of a box of Shreddies. So good luck with that.



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	<p>LOK SOUND EST. 1999</p>	<p>Sound-equipped Rapido models feature ESU Loksound V5 decoders. For more information, please visit www.esu.eu.</p>
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SW1200 DCC FUNCTIONS QUICK REFERENCE

- | | |
|--------------------------------|-----------------------------------|
| F0 Headlights | F10 Independent Brake |
| F1 Bell | F11 Class Lights (if equipped) |
| F2 Horn | F12 Switching Mode |
| F3 Curve Squeal | F13 Gyalite (if equipped) |
| F4 Dynamic Brake | F14 Emergency Light (if equipped) |
| F5 Doppler Horn | F16 Cab Light |
| F6 Rotary Beacon (if equipped) | F17 Flashing Beacon (if equipped) |
| F7 Dim the Headlights | F18 Track Inspection Lights |
| F8 Startup/Mute/Shutdown | F19 Turn off Numberboards |
| F9 Full Throttle | F20 Air Dryer (Spitter Valve) |

PROTOTYPE HISTORY

What exactly does the “SW” mean?

Simple answer: SWitcher. Pretty easy, eh? The 1200 part denotes “1200 horsepower.”

As produced, the EMD (Electro-Motive Division of General Motors in La Grange, Illinois) SW1200 was one of the finest switch locomotives produced. Over 700 of these versatile locomotives were built, starting in January 1954 through May of 1966.

As dieselization progressed, many roads found themselves in need of a compact, lightweight locomotive to replace steam power on branch lines and other over-the-road assignments (freight and passenger) not requiring a full-fledged mainline road switcher. The SW1200 combined the right size and muscle for these assignments. The SW1200 was available with both Type A and Flexicoil trucks, and the Rapido model represents those options. Other features available on the SW1200 include different fuel tanks, unique spark arrestors, MU cables, folding end-platform drop steps and different lighting options as specific to each road.

Flexicoil or Type A?

You'll notice the SW1200s were built with Type A or Flexicoil trucks. But, what's the difference? After polling 10 experts, 9 of them loudly proclaimed they'll take the Flexicoil for its ride equality. The 10th person never showed up. In reality, it would depend on the road that placed the order. Many claim the ride quality of the Flexicoil trucks was better than the Type A trucks, as well as more versatility on road assignments. If you and your friends would like to debate the truck styles in British Parliament-style, we would be more than happy to watch, just tell us when!

BREAK-IN

Don't break in to anyone's layout room to steal their SW1200. Just buy more for yourself. But this isn't about that kind of break-in.

Every locomotive needs a break-in period. Your SW1200 has been tested at our factory for about two minutes. That is 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 SW1200 on a test loop and just let it run in each direction for an hour or two. Fast and slow.

There already should be enough grease in the gearbox so you don't need to add any. Just let the thing run.

HOW TO HOLD YOUR SW1200

The SW1200 has numerous very delicate parts. If you want to back date it to be the quality of a model produced in 1978, then rip all the parts off and handle it like a

pigskin going for a touchdown. We're assuming you don't want to do that, so the SW1200 should be picked up carefully. The fuel tank and the middle of the long hood are both easily accessed and well balanced — if your hands are big enough, the best way to pick up the unit is to grab it from above with your thumb and forefinger on either side of the lower edge of the fuel tank. Always make sure your hands are free of shmutz before touching your engine.

If you are taking your SW1200 to the club all the time and regularly handling it, stuff will 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, the unobtainium was unobtainable.

We suggest wrapping your SW1200 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 can also use CA if you are very careful and very brave.

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 Jason or Bill was in the factory when your model was being assembled there may be a couple of bugs. They are always breaking stuff. 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).
- 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 SW1200 box and discover that something has obviously been bumped in transit and is damaged, please contact us. We know that some of you don't like the

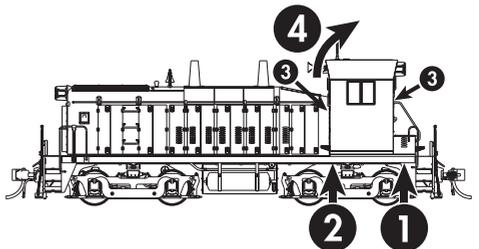
idea of human beings touching your models, but if it is a matter of gluing an exhaust stack back on you can do it yourself in less than a minute with a drop of white glue. If you really want to send your model back to us for us to install that, we would be happy to. But if you do send it back to us for us to put that one part back on and other stuff falls off when we send it back to you, then tough tooties. We're not fixing it again.

If you see some grab irons are missing and they are not floating around the packaging, let us know and we will send you replacements. More information about our limited lifetime warranty can be found towards the end of this manual.

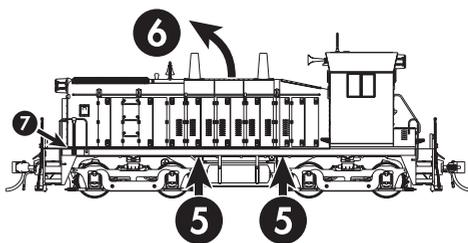
REMOVING THE SHELL

If you need to open up your SW1200 (to install a crew, install a decoder, etc.) and you also own our first production run of the SW1200RS (that's the Canadian version, eh) it is **not assembled the same**. We learned a lot, so please read carefully. You will need to follow these steps:

- Your locomotive is quantum linked with its counterpart in a mirror universe. Unfortunately, the model in the mirror universe has no detail parts. Should any detail parts on your model fly off, the Tantalus Field in the mirror universe will automatically retrieve those parts and install them on your model's counterpart. That means they are gone for good, or at least until molecular transporters or TOMTIT machines are invented. If you don't understand any of this paragraph, just please remember that DETAILS VERY VERY SMALL. CAN BE LOST EASY.
- To that end, please make every effort to ensure nothing flies away. We normally suggest you work in a room with everything white – walls, floor, ceiling, workbench, tools, clothes – but just to be safe we advise that you also work in a pressurized environment that looks like the inside of a NASA Shuttlecraft. Actually that would be really cool. If you do this, invite us over! Please?
- Turn the locomotive upside down in a foam cradle (painted white, of course) and remove the middle screw between the rear truck and the rear steps (1). Then, below the face of the cab are two tabs locking the cab to the chassis (2). Press these in until the cab disengages but do not remove the cab just yet. Turn the locomotive back on its wheels and remove the 4 handrails attached to the cab (two long hood rails and two step rails, if applicable) (3). Now, lift/tilt the locomotive cab backwards (as though the engineer put a little something extra into the fuel and the engine took off) and remove the cab from the body (4). Be careful as versions of the SW1200 equipped with a beacon/strobe on the roof may have additional wires coming from the cab.



- Returning back to the underframe, there are 4 screws outside all corners of the fuel tank (5), not to be confused with the 2 larger ones on the front and rear of the fuel tank that hold down the motor mount. These 4 screws secure the long hood to the chassis. Once these are removed, return the locomotive back right-side up on its wheels.



- Now that all the screws are removed, take hold of the long hood, and tilt it SLIGHTLY forward (6). We say slightly because if you tilt it too far, you'll break the tab that locks the long hood into the frame (7). Breaking that will be seriously bad news. Once the front tab is disengaged, you'll be able to fully remove the shell so that it may roam free across the flat plains of North Dakota. Ok, maybe we got a little carried away there. How about South Dakota? Montana? Texas?
- Any requests for replacement hoods or cabs because you broke the little tabby things will be met with laughter followed by a very polite suggestion that you find a nearby lake and jump into it. We do suggest wearing appropriate attire when jumping into the lake, and to not have your mobile phone on you when you jump in (unless you have a bag or rice available).

OPERATION – DC (SILENT)

If your SW1200 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.

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 SW1200 as it may not be safe (for your engine and/or your wallet) for you to use your controller.

Some train set throttles put out a very high maximum voltage that is not suitable for scale model trains. The maximum recommended voltage is 16 volts DC. Similarly, controllers designed for large scale trains put out a much higher voltage than your SW1200 can handle.

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 bag of popcorn left in the microwave 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 we may have to charge you for the replacement parts and/or the labour involved. That's because you didn't read this bit of the manual. In DC, the number boards are always on and the headlights and ditch lights (when equipped) are directional. The class lights are installed and wired, but they will not work in DC.

INSTALLING A SILENT DCC DECODER

The SW1200 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 decoder:

- ESU #58429 - LokSound 5 DCC with 21MTC

We feel the 21-pin connectors are superior because there are enough pins to ensure that all your lighting functions are connected. The necessary resistors are included on our ESU-designed motherboard so you don't have to futz around with resistors. Just plug in the recommended decoder 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.

ESU has made an SW1200 function mapping which can be downloaded into their non-sound decoder (58429) so that the function buttons and motor control are exactly the same as our factory-released sound versions. This should be available for download on the SW1200 page in the Support section of our web site. If it isn't, bug us. You will need an ESU LokProgrammer to write the function mapping to the 58429 decoder. If you don't have a LokProgrammer, you can adjust CVs in the usual way.

We will be selling SW1200 sound decoders separately; if they aren't on our web site by the time you read this, call Dan Garcia at the office and yell at him. But yell nicely please.

INSTALLING A DIFFERENT BRAND OF SOUND DECODER

Don't.

INSTALLING BATTERIES, RADIO AND A NEAT-O APP TO CONTROL THEM

Really... Don't.

ADD COMPATIBILITY TO 1970s TYCO AND LIONEL CONTROLLERS

Open model. Take out guts. Close model. Push with hand.

OPERATION – DC (SOUND)

To operate your sound-equipped SW1200 locomotive on a DC layout, just give the throttle some juice. The engine will start up once sufficient voltage has been reached (around seven volts). See the note above (in Operation – DC (Silent)) about using train-set or large-scale throttles. With DC layouts, you have very little control over the sounds of your model.

The only lights that work in DC are the headlights, ditch lights (when equipped) and number boards. You can't turn on the class lights in DC. Some throttle manufacturers produce special doo-dads which are meant to trigger the sounds in locomotives on DC layouts. As we have no involvement in the development of those doo-dads, we have absolutely no idea how they will affect your SW1200, for good or for ill. As always, we'll try to help you fix your SW1200 if one of these doo-dads turns your locomotive's circuitry into something akin to burnt toast, but we can't guarantee we'll be able to.

It is usually at this point in the manual that Jason inserts a gentle dig at his fellow modellers who won't switch from DC to DCC. The rest of the staff have repeatedly reminded him what happened the last time he did that. Something about being kidnapped by a band of journeymen from the masons' guild and being labelled a warlock. He still has nightmares about it. As long as we can keep reminding him of this event, he'll be nice to DC modellers. However, Bobby is the one writing this manual and he thinks DC is the easy way out. He insists everyone still operating DC is stuck in 1998 and drives a wooden panel station wagon.

For those of you with ridged foreheads who are feeling deeply insulted, we are pleased to inform you that Bobby has been demoted to Z Scale manual writing.

— NOTICE —

If you want to run your sound-equipped SW1200 on a DC layout, the Back-EMF circuit can cause issues when you're trying to bring your M420 to a stop. To turn off Back-EMF, you will need to bring your SW1200 to a model railroad equipped with DCC and set CV49 to 18. If you want to turn it back on, change CV49 to 19. If you have a large DC layout and you like to operate sound-equipped locomotives, it might be worthwhile to invest in an entry-level DCC system just so you can adjust the motor settings of your sound-equipped fleet off the layout.

OPERATION – DCC WITH SOUND

We go to extreme lengths for accuracy, in sounds as well as in looks. Our sound decoders are LokSound Select decoders by ESU, programmed with sounds we recorded from... well... a GMD-1. The prime mover is the same. The hood is the similar...Kind of. The exhaust stacks are the same. It sounds the same. So you can rest assured that the sounds are bang-on accurate. We have upgraded the decoder to include ESU's Full Throttle.

As we do for all of our sound decoders, we recorded the prime mover under load – it was hauling loaded grain hoppers. Locomotives sound a lot different when they are working. If you have decoders from other manufacturers in your locomotives you might want to check out the available line of Rapido decoders on our web site. All of our decoder sounds were recorded under load and we simply can't stand decoders that don't have this feature.

More detailed decoder instructions, including all sorts of weird CV settings we don't understand, can be found in the ESU LokSound Select decoder manual. This is available for download on the SW1200 page in the Support section of our web site.

LOCOMOTIVE ADDRESS

Your Rapido SW1200 comes from the factory with a decoder address of 3. We're not sure the origins of this, but we have a feeling it's related to the origins of video games when you had to turn the dial on your television to Channel 3 in order to experience the magic and wonder. That's why your SW1200 locomotive can, in fact, play Pong. Sorry, we mean "APF TV Fun" for those of us who couldn't afford the real Pong.

We suggest if you are using DCC control that you first test that the locomotive responds on address 3. Once you have verified that the locomotive is responding you should assign it a unique address (we suggest the road number of the locomotive) 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 however that if you do program the locomotive on the main and you have any other locomotives on your layout assigned to address 3 (the normal default address for new locomotives) that ALL of them will likely also be changed to your new address! Also be aware that if you give your locomotive a four-digit address it will not work at all if you try to run it on a friend's DC layout.

Also please keep in mind that some DCC systems do not have sufficient power to program sound-equipped locomotives on the mainline. If your sounds do not operate correctly on a Digitrax DCC system, this likely means that you need to clear the memory on your system, achieved by "clearing slot #36." A basic summary of how to do this can be found on the SW1200 page in the Support section of our web site. More detailed information can be found on the Digitrax web site.

If you have a really old DCC system, you may find that this locomotive won't work at all – nor will many other new models. Go update your DCC system to a newer version. Your computer is updated regularly. So is your cell phone. Your DCC system should be updated as well.

TURN ON THE SOUND

Press F8 and you will hear the SW1200 startup sequence followed by the sound of it idling. You can adjust CVs to prevent the locomotive from moving until the startup sequence has played out. We aren't keen on this feature so we disabled it. Refer to a full ESU LokSound Select decoder manual for more information on how to put it back. You can download it from the SW1200 page in the Support section of our web site. The feature is called the "Prime Mover Startup Delay" and at the time of writing it was on page 35 of the ESU manual.

If you 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.

Note that if you are listening to your SW1200 idling nicely and then you select another engine with your throttle, 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 his or her controller, the SW1200 will promptly shut down. They will need to press F8 again.

FUNCTIONS

- | | | | |
|----|-----------------------------|-----|-------------------------------|
| F0 | Headlights | F10 | Independent Brake |
| F1 | Bell | F11 | Class Lights (if equipped) |
| F2 | Horn | F12 | Switching Mode |
| F3 | Curve Squeal | F13 | Gyalite (if equipped) |
| F4 | Dynamic Brake | F14 | Emergency Light (if equipped) |
| F5 | Doppler Horn | F16 | Cab Light |
| F6 | Rotary Beacon (if equipped) | F17 | Flashing Beacon (if equipped) |
| F7 | Dim the Headlights | F18 | Track Inspection Lights |
| F8 | Startup/Mute/Shutdown | F19 | Turn off Numberboards |
| F9 | Full Throttle | F20 | Air Dryer (Spitter Valve) |

— 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.

FUNCTIONS: MORE INFORMATION**F1 Bell**

We have used a fantastic recording for our SW1200. We polled a bakers' dozen of railroaders and came to the conclusion that the bell ring rate is firmly set to "as long as it makes noise." Every engine seemingly had a different bell ring rate. We chose a nice one.

F2 Horn

We loved our last horn recording so much, we decided to use it again! To get a short "toot" just tap F2 or your "HORN" button. If you hear a long tail-off you are tapping for too long. If, no matter what you do, you just can't get the darn thing to make a short "toot," switch to NCE. The default horn is a single chime Leslie S-25, but we also have 5 more horns to pick from on the decoder. Refer to "Horns" below. (Or just blurt out, HONK HONK!)

F3 Curve Squeal

Since it was never possible for an SW1200 (or any road switcher for that matter) to SILENTLY go about working tight curves and switches without waking up half the neighborhood, we've included curve squeal for these hard-working road switchers. Press F3 for curve squeal. If your DCC system supports latching on F3, the curve squeal will continue as long as F3 is pressed. If not, you need to press once to turn on the squeal and press again to turn it off.

F4 Dynamic Brake

Look, some people like the sound of it. Some people don't. Most SWs didn't have them, but that's not stopping us from including it. Some were in fact retrofitted with dynamics, so now you've got the sound all ready in the event you want to do some kitbashing.

F5 Doppler Horn

We're known for our doppler horn recordings, and we've managed to find a space shuttle equipped with an air compressor big enough to blow a beautiful Leslie S-25. It's a wonderful sound, so make sure to play this tune on approach to a level crossing.

F6 Rotary Beacon (if equipped)

If your locomotive comes equipped with a rotary beacon, this function will allow you to activate it. Pressing F6 turns it on. Pressing F6 again will turn it off. This process can be repeated infinitely. If your beacon does not work, check and see if it's a different type of beacon, because we've got so many lights available on the SW1200, you'd think we cleared out a warehouse at a discount!

F7 Dim the Headlights

If you are approaching a station or an oncoming train you can turn off the ditch lights and dim the headlights automatically by pressing F7. You don't want to blind anyone, now do you? I'm getting a sense of déjà vu. I'm getting a sense of déjà vu. Bobby, you're fired. Bobby, you're fired.

F9 Full Throttle

ESU's "Full Throttle" feature allows you to play the prime mover of your SW1200 like a musical instrument, even if you've never played a musical instrument before. When you press F4, you turn on "drive hold." This keeps the speed of the engine constant at whatever speed step your throttle happens to be on. Then as you increase the throttle, you hear the prime mover revving up. This allows you to simulate hauling a heavy load. On the prototype the prime mover would be up at 7 or 8 while the engine is moving slowly. If you want to shove the throttle into notch 8 and hear it slipping and struggling as it revs up, just crank up the throttle really quickly.

"Full Throttle" is even neater when you throttle down, as it allows you to simulate "coasting" which is such an important part of running a real train. When you press F4 again you turn off "Full Throttle" and the engine will accelerate or decelerate to whatever speed step your throttle happens to be on. For realism it's a good idea to take note of what speed step your throttle was on when you turned on "Full Throttle" and be back at that speed step when you turn "Full Throttle" off. Otherwise your SW1200 may take off. Eh.

F9 Class Lights (if equipped)

They do exactly what they say – this function toggles the class lights on/off. SW1200 locomotives only use white class lights. This is normally the section where we discuss why this locomotive needs class lights, but to be honest, it just looks neat. Don't ask!

F10 Brake

We've shoved this to a higher function button. If you are one of those three people, you are clever enough to remap this feature onto a lower function button by following the instructions in the full ESU Select Decoder manual, which can be downloaded from the SW1200 page of the Support section of the Rapido web site.

F11 Cab Light

No crew should have to write orders in the dark. Or eat their lunch in the dark. Or venture into the depths of the cab fridge (included on all SW1200 models) in the dark. So give your crew some light by pressing F11. Pressing it again turns it off. We won't judge if you want to have a disco light show in the cab

F12 Switching Mode

If you press F12, the headlight and rear light will both be on dim. This is appropriate for switching operations or for running light on the mainline. Press F12 again to turn off the switching mode lighting.

F13 Gyalrite (if equipped)

Some roads equipped their locomotives with a Gyalrite. We think it's a neat little feature. We also think it would be incredible to make a proper mechanical device to rotate the lens like a proper gyalrite. We're not quite there yet though, but we still think this looks really cool nonetheless! Pressing F13 toggles the light on and off.

F14 Emergency Light

Much like the Gyalite, some roads (ok, it was just SP) equipped their locomotives with an emergency light that would come on with a loss of air (basically, an emergency brake application). Your actual locomotive is not equipped with real working air brakes, so we're leaving this to a function button. Like most other lights, pressing F14 toggles between on and off.

F16 Cab Light

Need to read your orders? Can't find your coffee? Now where'd I put my lunchbox? No problem. Just turn on the cab light using F16. If you've resolved what you have to do, or you're done with your coffee, hit F16 again to turn the light back off.

F17 Flashing Beacon (if equipped)

How is it possible we still have yet another beacon? I mean, I've lost count now. Imagine if one locomotive had all these light functions? It'd be a disco rave! Either way, F17 toggles the flashing beacon on/off, but only if your unit is equipped with one. If not, it will do nothing. Absolutely nothing.

F18 Turn off Track Inspection Lights

These lights shine down onto the roadbed. Why did we include them? Because they look neat, of course. Oh, and your engineer will be happy at night when he's making a shove. By default, they are on. Pressing F18 will turn them off.

F19 Turn Off Number Boards

The number boards are lit by default, a big improvement over many of our early models. It was annoying when you'd lose power because of a short somewhere else on the layout and then you had to go through the tedious task of turning your number boards back on. If you really want them off, press F19.

F20 and F21 Air Dryer (Spitter Valve)

To save you from the saliva clean-up should you try to mimic the sound of the spitter valve, we've provided its sporadic sounds on F20. By default it's always on, as the real thing would always be going when the locomotive is running (and for a few minutes after it's shut down). But if you prefer to not hear it at all, just press F20 to silence the spit.

HORNS AND BELLS ... AND MORE!

Ah, yes. The part where we describe how every SW we've seen has a different horn. Some have the melodramatic single chime "blat" horns (Leslie S-25), some have a three-chime Leslie S-3 or Nathan P-3 horn, or for the NH fans, a Hancock tooter. (That's the one that sounds like a wimpy whistle...OK, Bobby's really fired now.) But if you really want to, you can just blurt out loud: HONK HONK! ...Wait, how did this make it through editing? And not only horns, but we've got bells, brake squeal and even different sound recordings for the air dryer! How cool is that?

Horns

- CV 163-0 Nathan S-25 (Default)
- CV 163-1 Nathan P-5-R24-OC
- CV 163-2 Nathan P-3-OC
- CV 163-3 Nathan M3
- CV 163-4 Leslie S-3L
- CV 163-5 Leslie S-2M
- CV 163-6 Hancock Air Whistle

Brake Squeal

- CV 165-1 - Composite Shoes (Default)
- CV 165-2 - Cast Iron Shoes

Bells

- CV 164-0 - Bronze Bell #1 (Default)
- CV 164-1 - Steel Bell #1
- CV 164-2 - Bronze Bell #2
- CV 164-3 - Steel Bell #2

Air Dryer

- CV 166-0 Air Dryer #1 (Default)
- CV 166-1 Air Dryer #2
- CV 166-2 Air Dryer #3
- CV 166-3 Air Dryer #4

Note that you can only change these sound settings on a programming track or using a LokProgrammer.

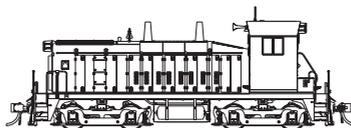
SOUND VOLUME SETTINGS

The sound volumes on your decoder have been pre-set at the factory to levels that we found comfortable on our test tracks.

Sound levels are very much a matter of personal taste (especially if you are going deaf like we are), and what sounds great in one layout environment may sound 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 set 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 as each system is slightly different); 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. 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 might want to keep.



SW1200 SOUND VOLUME SETTINGS

KEY	FUNCTION	SOUND SLOT	CV	DEFAULT	YOUR VALUE
	Master Volume		63	125	
F1	Bell	4	283	60	
F2	Horn	3	275	192	
F3	Curve Squeal	23	435	50	
F4	Dynamic Brake	6	299	100	
F5	Doppler Horn	28	475	192	
F8	Prime Mover	1	259	128	
F10	Independent Brake	11	339	100	
	Radiator Fan	8	315	100	
	Compressor	7	307	75	
	Short Air Let Off	24	443	20	

FACTORY RESET

On your SW1200, you 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. You’re out of the band.

You can NOT lose all of the pre-recorded sounds on your SW1200 decoder by doing a factory reset. However, after performing a factory reset your SW1200 may begin to do the Watusi and recite lines from Apocalypse Now. If that happens, you have probably lost your mind. Those elephants are not real. Lie down, relax and maybe the drumming noise in your head will stop. Dum-dum-dum-dum. Dum-dum-dum-dum.

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 Select decoder manual. This is available on the SW1200 page in the Support section of our web site.

LIMITED LIFETIME WARRANTY

We will do our best to solve any problems or issues that you may have with your SW1200 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. We normally keep spares for up to six months after a model is released. If you are like most of us and – after purchasing this locomotive – you dismissed it to the dungeon deep beneath your layout and are now just discovering it 35 years later after you heard it crying “run me”, then you are on your own if there are any issues. Jason is long retired and still trying to repair our sleeping car, Edmundston. The rest of us have moved to Tonga.

There are a number of things that this warranty cannot cover. If your SW1200 arrives with a couple of loose grab irons or underbody bits, there is a very good chance that you can effect 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, such as Weldbond, 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 – call us or send us an email and we'll send you some replacements.

Of course, damage caused by running your SW1200 at full speed around a 15"-radius curve along the edge of your layout, modifying your SW1200 to work off rocket fuel, not modifying your SW1200 to work off rocket fuel but still filling it with rocket fuel, strapping your SW1200 to a firecracker for an entertaining YouTube video, or any other damage caused by you that we haven't been able to cover here is not covered by the warranty. However, if catastrophe does strike and your locomotive gets damaged, please give us a shout and we'll do our best to help you out. **Yes, even if it was your fault we will try our best to fix your locomotive for you. Don't be shy!**

If you really hate your SW1200, please feel free to tell the internet model train forums of the world. Please remember that our company name is spelled T-Y-C-O and we are based in Woodbury Heights, NJ.

PARTS DIAGRAM

Because of the large variety of parts for the SW1200 project, we couldn't effectively include it in the manual or anywhere in the locomotive box.

You can find the full parts diagram on our website, by visiting the **Product Support** section at www.rapidotrains.com.

ACKNOWLEDGEMENTS

Many people have provided their kind assistance in order to ensure that our SW1200 is an amazing model. Special thanks go to Thom Anderson, Ed Chapman, Paul Cutler III, Nate Dahms, Blair Kooistra, Jason Korth, Dave Lotz, Jim Mischke, the Oregon Pacific Railroad Co. and Oregon Railway Heritage Center, Nathan Obermeyer, Dean O'Neal, Richard Samuels, Greg Sommers, Stan Stenicki, Justin Tracy, Paul Tracy, Harry Wong and the always amazing Robert J. Zenk. Any mistakes in this manual are all Bobby's fault. But as we've just fired him three times you can't really blame him.

