

## PROTOSOUND 3.0 “O” GAUGE TROUBLESHOOTING

### Start Up

### Remedy

When I apply power to my DCS track my engine doesn't do anything. No lights, no sound, no nothing.

This is normal. You have to hit the start up button. Check to see if that section of track has power. Use a voltmeter or a lighted passenger car to test for power. Slide the engine a couple of feet in either direction; you may have a bad track section. Have you got that section electrically isolated with a toggle switch or other device?

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If this is an Electric Engine with operating Pantographs, be sure the Pantograph switch is set to “Track Power” rather than “Pantograph Power.”  
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I get an error when I hit Start-Up in DCS.

Have you recently changed the engine address?  
  
Check if there is power on that section of track the engine is sitting on (there has to be power for the signal to get to the engine and for the engine to be able to "hear" the signal). If you have tow engines on the track they both may have the same address. Take one off the rails and try it again.

When I apply power to my DCC track my engine doesn't do anything. No lights, no sound, no nothing.

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Did you press F3 yet? F3 on your DCC handheld will startup the engine. Check to see if that section of track has power. Use a voltmeter or lighted passenger car to test for voltage. Have you got that section electrically isolated with a toggle switch or other device?  
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Some “O” Gauge PS3 engines do not come with the “DCC/DCS” switch installed. In order to operate these engines in DCC without a “buzzing” sound, you will need to first remove the body shell and then remove the 2-pin jumper. Please see [this article](#) for more info  
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When I apply power to my Conventional AC track, only my headlight comes on, nothing else.

This is normal behavior. The super capacitors need about 10-20 seconds to charge before an engine will start up. Make sure you have the recommended 12-14Volts powering

the track continually during this charge-up period.

My Steam engine has sounds, but no lights or motion. Check the drawbar connection. Without a secure connection between the boiler & tender, the separate circuit boards will not be able to communicate. Check the wires coming from the internal electronics to the drawbar.

Sound

Remedy

I have no sound from my engine, but my lights are on and it moves just fine. If operating in DCS, you may have it turned off. Repeatedly press VOL+ to bring the Master Volume up. Did you turn off the ENG sounds? Press the ENG SND button on your DCS controller. Check that you haven't lowered any of the independent engine volume settings (ENG sounds, Bell, Whistle and Accent).

You may have it turned off. Repeatedly press F7 on your DCC system to cycle through the volume levels - there are 9 levels: 0 - MAX.

If running in AC or DC conventional power, check to be sure your Volume Pot (usually located on the underside of the engine) is turned all the way up.

When I press the Whistle Button on my DCS Remote or DCS Commander, the whistle doesn't blow. Check if the playable whistle is active. On the DCS Commander there will be two dashes on the right side of the LCD if it's active. Press "A1" twice to ensure it's turned off. On your DCS Remote press the "SPW" button twice to ensure it's disabled.

There's a crackling sound coming from my tender. Check to see if a screw or some other material hasn't lodged itself in the underside of the tender.

The sounds seem distorted, especially when the Horn or Bell is activated in Conventional AC. Proto-Sound 3.0 volume is set too high. Turn the volume control knob on the bottom of the chassis counter-clockwise to reduce the volume.

When I run Doppler, I can hear the Doppler shift but then the engine sounds fade out and I can't get them. This is normal operating in DCS. You will need to press the Doppler button on again to turn Doppler off. Once Doppler

back.

is turned off, your engine sounds will return to their normal volume setting.

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This is normal. You will need to press the F12 button on the DCC controller again to turn Doppler off. Once Doppler is turned off, your engine sounds will return to their normal volume setting.  
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Smoke

Remedy

My engine isn't smoking at all.

Press the smoke button: this will activate the smoke.

If you just added smoke fluid it may have formed a seal in the stack by forming a bubble. Gently blow into the stack to clear the air bubble.

Check the tender/boiler drawbar connection. They must be locked together in order for the smoke unit to function.

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Make sure you've got the smoke switch ON. It must be ON for the smoke to operate in DCC mode.

Press F8 on your DCC controller. This will activate the smoke.

If you just added smoke fluid it may have formed a seal in the stack by forming a bubble. Gently blow into the stack to clear the air bubble.

Check the tender/boiler drawbar connection. They must be locked together in order for the smoke unit to function.

My engine barely smokes.

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You may have set the smoke to Low. The smoke "volume" can be changed from Low to Med to High.

Check for an obstruction in the smoke stack.

Add 10 - 12 drops of smoke fluid.

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You may have set the smoke to Low. F17 will vary the smoke levels. Or, if you were running the engine in DCS mode, you may have toggled it there (if you don't have F17 on your DCC controller you will have to put it DCS mode and change it using a DCS system).

Check for an obstruction in the smoke stack.

Add 10 - 12 drops of smoke fluid.  
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Lost Address

Remedy

In DCC, I can't call my engine on the address I believe it to be set at.

In DCC, Perform the 55-55-55 Reset per your Operators' manual's instructions.

If you are trying to 'talk' to an engine on its short address, you may have set CV29 to activate long addressing. You could either try getting a hold on the engine using its last known long address, or setting CV29 to equal "6" which will tell the engine to look at its short address.

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### Lights

### Remedy

One of my lights is out.

Check that you haven't turned it off with the DCS controller. You have independent control over lights on your engine.

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Check your F keys. F0 is the headlight (also controls the backup light) and F5 will toggle the cab light.

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None of my lights are on.

See "One of my lights is out" from above.  
Is the engine getting power? Check to see if there is voltage on the track or move the engine a few feet in either direction.

Check the tender/boiler drawbar connection. You've got to have them locked together in order for the engine functions to work.

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### Operation

### Remedy

When I apply power and hit Start-Up/F3, my engine starts up (lights and sound) but it won't move.

This is normal. Dial up the speed on your DCS Remote or DCC controller to make the engine move.

If you've increased the speed to the engine, check the tender/boiler drawbar connection. You've got to have them locked together.

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My engine hesitates at slow speeds.

An engine may do this right out of the box if it has not been lubricated. Follow the operator's manual lubrication instructions and then try running it again.

New engines, even after lubrication, may take a little while to get everything run-in. Be a little patient and let the engine run for a while at higher voltages.

Check to see if you have any kind of binding on the side rods. There may be a piece of debris preventing the side rods from turning smoothly.

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My engine will speed up, then stop, then speed up, then stop.

This indicates there is no tach board signal. Protosound 3.0 engines will repeatedly speed up & stop trying to obtain the speed signal that is sent from the tach reader. Either contact MTH Service or your nearest ASC.

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My Premier 2-3-1 Pacific or 241A Steam or Railking Imperial S2 Turbine is operating intermittently.

**STOP RUNNING THE ENGINE!**  
These 3 specific engines might require after-sale installation of an added resistor. Please reference the [Service Advisory](#) for more information. The wire going to pin 4 needs an added 470ohm resistor. In the 2-3-1 & 241A models, this wire is BLUE. In the S2, it is GREEN. As always, please call MTH Customer Service should you have any questions.

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PFA

Remedy

When I enter PFA all that happens is the bell rings. What do I do?

Press the DIR button. Your engine will stop and begins the arrival sequence. Pressing the DIR button will cycle you through the next 3 PFA sequences.

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I hit F4 to start PFA but the engine just keeps ringing its bell.

Bring the engine speed to 0. You will now hear the station arrival or freight yard sounds begin. Pressing F4 will cycle you through the subsequent steps in the PFA script.

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Why does my engine run away all by itself after the PFA is over?

This is normal. The engine will leave the station at the same speed it entered (when hit the PFA/F4 button). The speed setting can be changed after the bell stops ringing.

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