



# NEWSLETTER

Vol. 37 – No. 1  
Jan. – Feb. 2025

**Current Central Station 3 Version – 2.5.2 (6)**  
**Current Central Station 2 Version – 4.3.0 (11)**  
**Current Mobile Station Version – 4.15**

**Digital Consultants**  
**Rick Sinclair**  
**Curtis Jeung**

---

We just came back from the Amherst Railway Society Railroad Hobby Show. This is a nice big show in West Springfield, Mass. and as always, it was great to see so many familiar faces and meet new fans!

Our first article is about repairing a locomotive that has a Soft-Drive motor installed, and our second article explains how to transfer a layout profile from a CS2 to a CS3.

## **Soft-Drive motor replacement**

As many of you know, the “Soft-Drive” motors are no longer available from Marklin as a spare part. If you have one of these locomotives, there are very few options if the motor fails. In this article, I will show how to replace the motor and get the locomotive back into service.

Heads-up - There are a few different types of Soft-Drive motors, and this repair will not fix all those Soft-Drive locomotives. For instance, some locomotives have cardan shaft cups on them and this fix will not work for those types of locomotives.

A few years ago, I was told of this motor swap by another repair person. It is always good to exchange stories about how to accomplish different repairs just to see what you can learn. When I learned of this swap, I happened to be working on a steam locomotive and luckily, I was able to use this technique to repair the locomotive.

Recently, I received a Marklin 39800 (V200) locomotive that had stopped working. I told the owner that I might not be able to fix it, but I would see what I could do. When I received the locomotive and evaluated it, not only was the motor seized, but the decoder was also damaged. It would basically need a full upgrade to get it running again.

## Teardown

Originally, I had planned on replacing the powered bogie with a 5-pole motor bogie and installing a new decoder. This was still an option, but it would have meant waiting for parts and screws that would need to be ordered. A simpler and less expensive solution was to just change the motor and decoder. The owner chose to have a sound decoder put in also, which gave this locomotive more sounds, and modern MFX as a bonus.

In figure 1, the original electronics are still installed, and everything will need to be removed for this conversion.



Fig. 1 - Original configuration inside locomotive.

The powered bogie is removed and then the motor is removed (Fig 2). Once the motor is removed the original motor "saddle" can be removed. The new motor comes with a new mounting bracket for an easy installation (Fig 3).

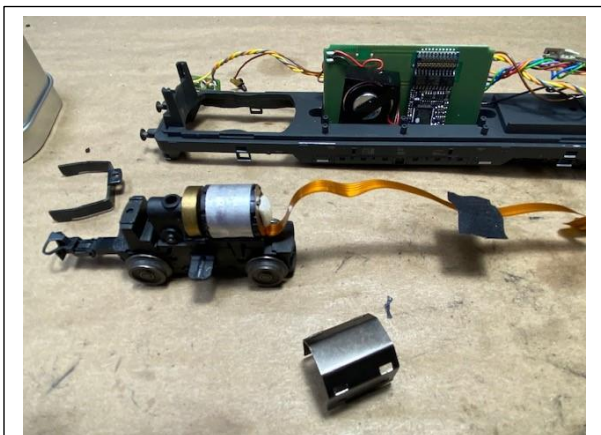


Fig. 2 – Powered bogie removed.



Fig. 3 - Old motor saddle (top) and new motor mount (bottom).

## Motor installation

The new motor (E196528) comes with a worm gear on the shaft and a flywheel. The mount has the correct gears to mesh with the gears in the bogie, so it fits like it was made for it (Fig 4). There is also a steel strap that is not used in this application because I did not use the original motor saddle since the new motor will not fit in it.



Fig. 4 – Motor and hardware.

## Hardware Needed

The new motor bracket installs into the bogie with the original screw that held the original saddle. Since the steel strap is not used, the motor will have to be screwed to the motor bracket. This is where there could be an issue. The motor does not come with mounting screws so you will need to find two m2 x 4mm (Fig. 5) screws. Märklin offers an option with part number E266671. There are four screws included. Warning - be sure not to use a screw longer than 4mm because it will interfere with the motor winding when it spins.



Fig. 5 Mounting screw for motor.

## Flywheel Issue

With the motor mounted, I installed the bogie into the frame. It was clear that there was a problem with the flywheel touching the frame (Fig. 6). This has been the problem with this motor in every Soft-Drive locomotive I have installed it in. The solution is simple, cut the flywheel off with a hand grinder and cut-off wheel attachment.

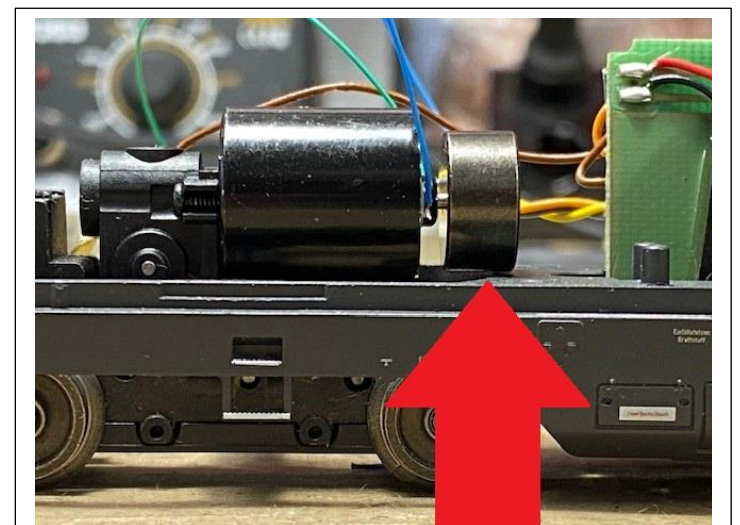


Fig. 6 – The flywheel touches the frame.

Another option would be to remove the flywheel and turn it down on a lathe but for the time involved (and not many people have access to a lathe) I chose to take the simple route for those of you doing this at home. Figure 7 shows the flywheel cut off with only 30 seconds of work and readily available hand tools. This also allows for clearance to the solder points for the motor wires.



Fig. 7 – Flywheel cut off.

With the flywheel removed, and everything installed, there is plenty of clearance for the bogie to pitch and pivot (Fig. 8).

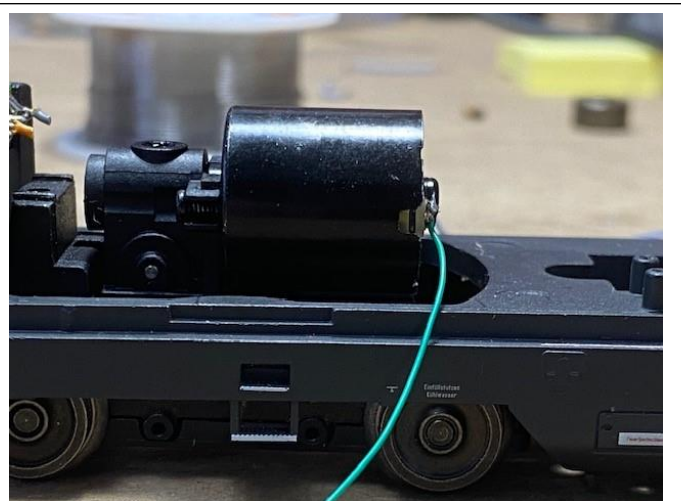


Fig. 8 – Plenty of room for the bogie to move.

### Decoder Installation

Once I had the motor installed, the decoder installation was just like any other upgrade. I used a 60977 mSD/3 decoder upgrade kit. There is a hole to mount the decoder holder and threads tapped already (Fig. 9). With the holder in place, the decoder mounting board snaps in and the standard wiring can be done. I chose the motor type as “5 engine DC soft” when programming the decoder and it runs fine with no flywheel. I think most motor settings will work for this motor also.



Fig 9 - Decoder holder mounted.

The finished installation was made neat and clean with some wire retainers (E285240 - Fig. 10) and there is plenty of room inside for the speaker (Fig. 11).

The decoder has many more sound functions than the original and it was a simple matter of modifying a standard V200 profile. The locomotive ended up having 15 functions (7 originally).

Since the lights are standard bulbs in the original sockets, the headlights and red taillights work just like the original and I didn't even have to change the bulbs (Fig 12 and 13).

I hope this helps someone to get their locomotive back in service. It is an easy conversion and since this motor should be available for a long time, if it fails again, it is an easy swap.

**Enjoy Your Hobbies!**

**Rick Sinclair**

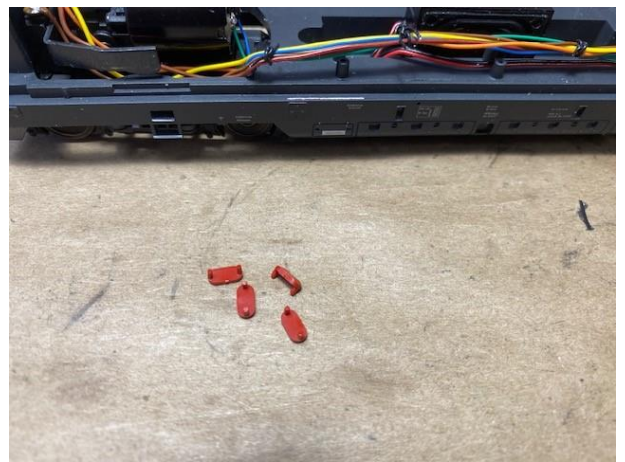


Fig. 10 – Wire retainers E285240.

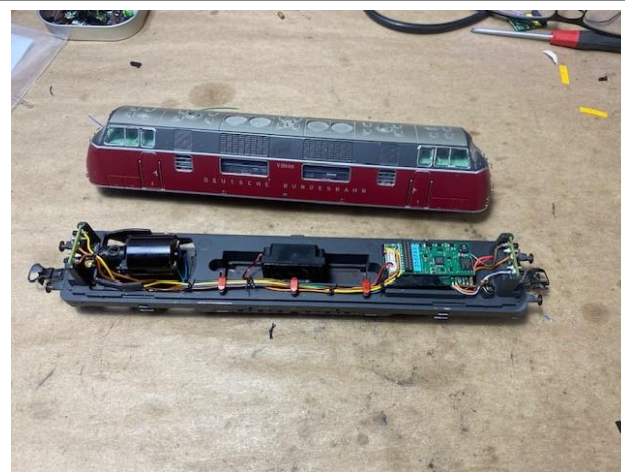


Fig. 11 – Clean wiring with wire retainers.



Fig 12 – Headlights.



Fig. 13 - Tail lights.

## A Transfer of Data from a CS2 to a CS3

In this Month's article, we will have a look at what you may expect when taking a full CS2 layout and upgrading to a CS3. I will explain some areas that you will want to take note of when making this transfer.

If this applies to you, the first step you will want to take is to make a back-up of your current CS2's operating profile. This is simply done by initiating a Save function. You may want to do this twice by first saving on the internal drive and then saving to a USB stick. When saving to a USB memory stick, it has been recommended not to use a large memory stick (nothing over 32 GB). I use an 8 or a 16 GB drive, but they can be hard to come by. Fig. 1 illustrates the section on the CS2 where to initiate the save function. Note that you will use the "Daten:" functions, NOT the "Update:" functions.

Once this is complete, you are safe to load the CS2 profile onto a CS3. You will also have the assurance that the CS2 data is intact for any operation reference should it be needed.

To load the data from the USB stick, you should be familiar with the screen in Fig. 2. You will be using the "Restore" function for this action. When clicked, you should see a screen like the portion represented in Fig. 3. With a USB stick inserted in the back of the CS3, you should see the listing of retrieval devices on the left of the table. When inserting the USB, use one of the white USB ports, as the black port enables a power supply for devices that need them (I.E. Mobile Tablets).

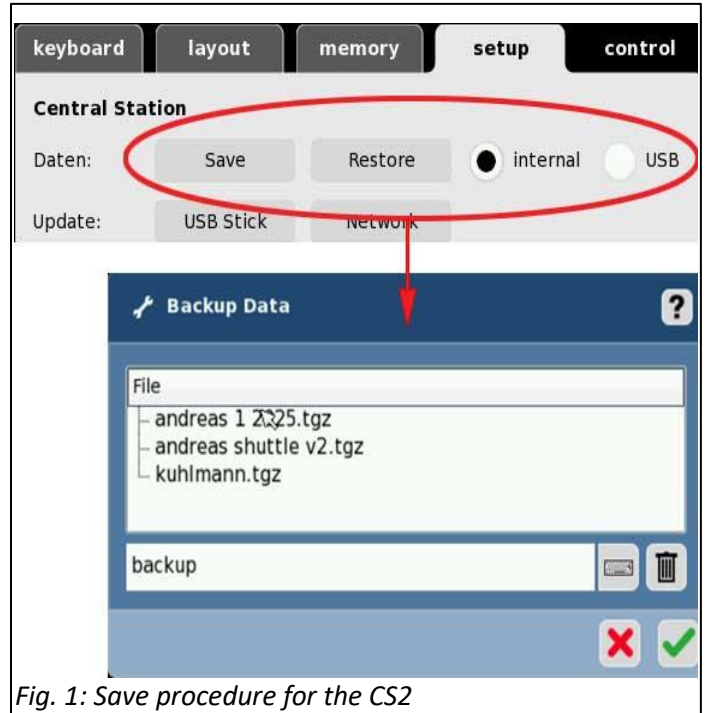


Fig. 1: Save procedure for the CS2



Fig. 2: CS3 Save and Restore functions

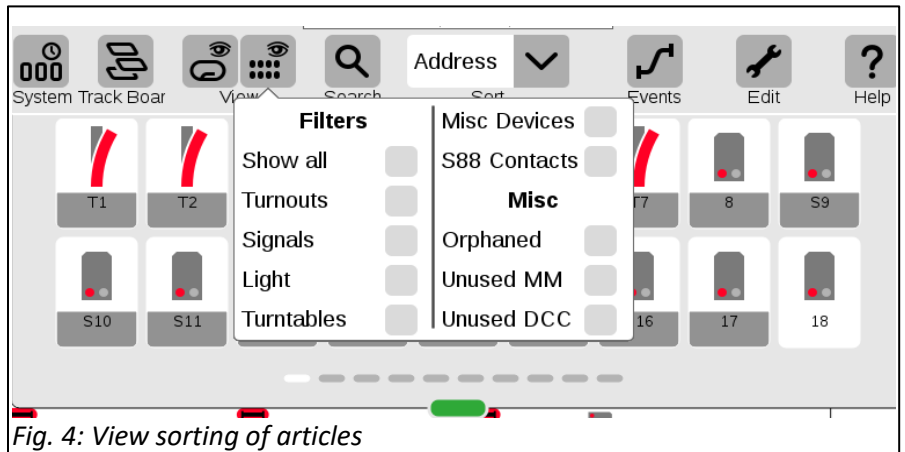


Fig. 3: How to select a restore file on USB

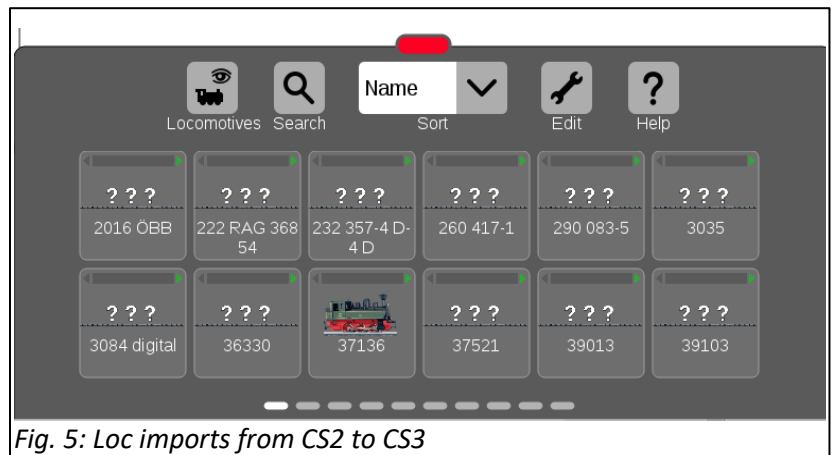
Clicking on the correct retrieval device will help you locate the proper file. In this case, it was automatically installed in the cs2 folder when saved.

Once this action is complete, you will see that all your track devices have been loaded into the CS3. The labels used in the CS2 have been retained.

Without a doubt, you see differences in how the CS3 handles/displays all your devices. Unlike the CS2, the CS3 will not display unnecessary pages of articles (defined as Lights, signals, sensors etc.). Only devices that are installed will have a place on the article list. These are also 'paged', so if you do not see an element, you can page through the devices. You can also use the 'View' sort button to group elements for viewing (see Fig. 4). Along the bottom, you can see the 'Page' buttons.



Locomotive collections will also load in with their correct CS2 labels. However, the loc's icons may largely be replaced by the '???''. There may be an associative difference in how the icons are assigned by software within either the CS2 or CS3. If the correct loc icon is not in the CS3's data, custom icons can be loaded and will not be discussed here. The Paging function is also available if you have a large collection of locomotives (Fig. 5).



The most notable difference that you may see in the CS3 screens will be the layout (track plan) pages. Updates to the CS3 have made large improvements on the translations from the CS2 track plans into the CS3. Track plan items are now in better positions relative to the originals. However, some tweaking will still be necessary. Especially regarding laying out the track lines. This is largely unavoidable as the software architecture is vastly different from the 'control board' elements of the CS2.

On the next page (Fig. 6), you will see a side-by-side comparison of the direct translation of a CS2 transfer into the CS3. You can see how some elements will need to be rotated, while they are accurate to the layout in the original CS2 plan. Other areas will need edits according to the CS3 architecture. Adding track routing elements in the CS3 for example.

### For Next Time

This article covers the initial aspects of what is seen in a transfer of data from a CS2. The transfer is simple and somewhat worry free. Track devices come in with full functionality at their core, but there are some topics not covered here. What was not covered in this article is an examination of how the sensors and

events (need Memory) routines are translated. Sensor assignments will need to be rematched, and events may need to be double checked. I will also need to reprogram a shuttle system that was difficult for the user to maintain in the CS2. I will show the revised track layout plans of the CS3. Essentially, I will be running through some of the procedures needed in upgrading to a CS3.

- Curtis Jeung

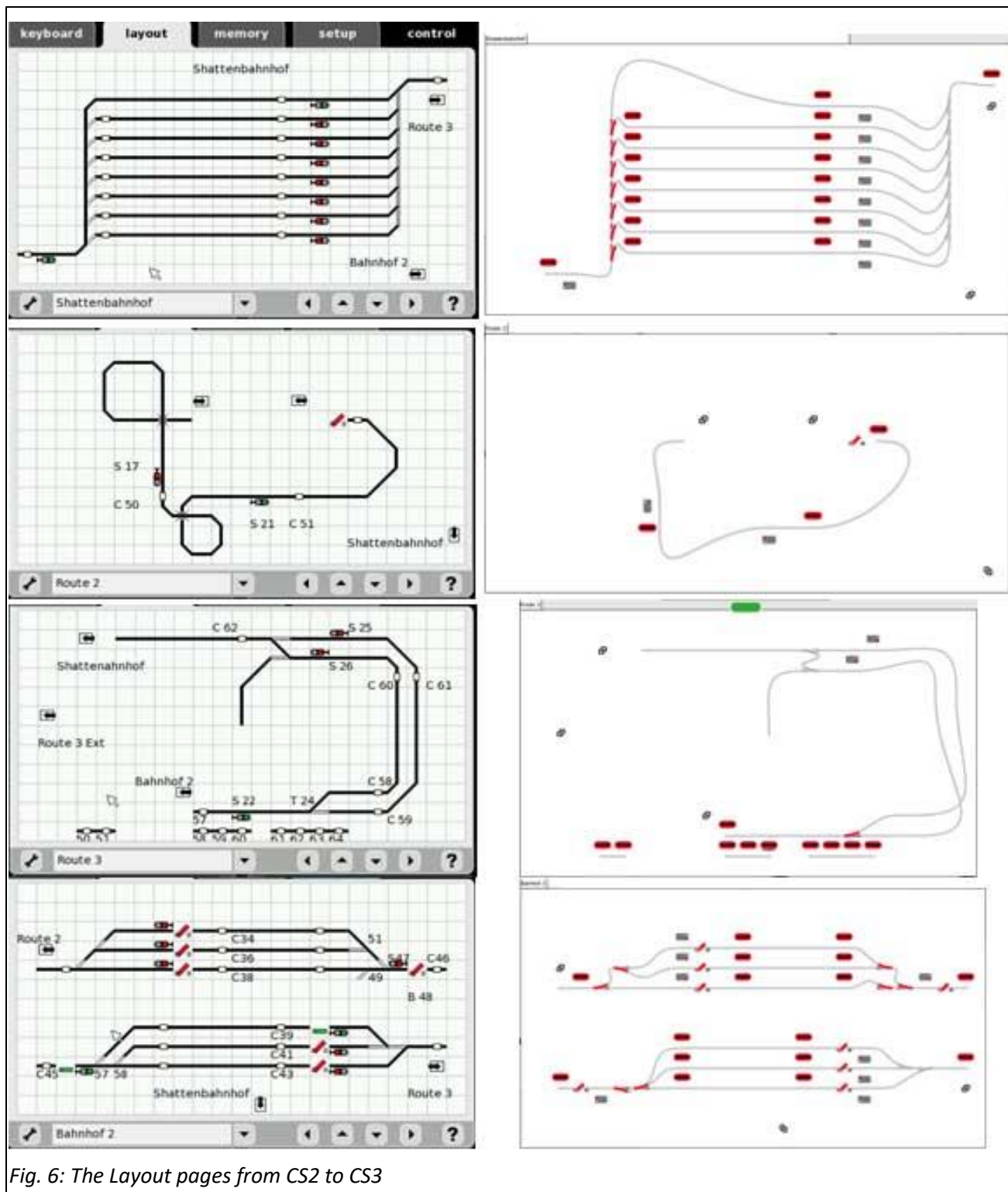


Fig. 6: The Layout pages from CS2 to CS3



---

## Upcoming appearances:

- **Bushnell Station**  
Feb. 22, 2025  
Bushnell, FL
- **ONLINE Webinar**  
Feb. 12, 2025

**To contact Rick and Curtis for help with your Digital, technical and product related questions:**

**Phone: 650-569-1318 Hours: 8:00am – 5:00pm CT. Monday through Friday.**

**E-mail: [digital@marklin.com](mailto:digital@marklin.com)**