How-to Video

Silver Pulser SP7

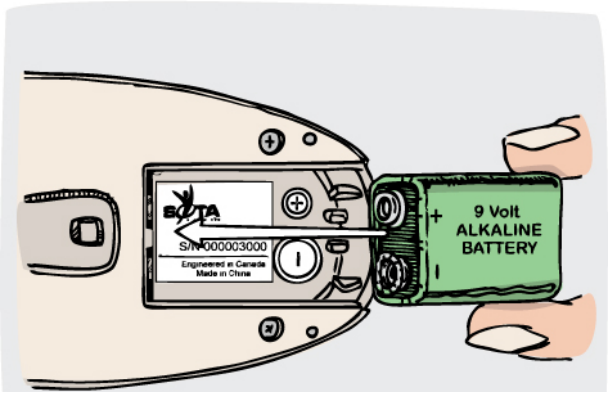
Ionic~Colloidal Silver Transcription

Hello, I will be demonstrating the use of the Ionic~Colloidal Silver feature of the SOTA Silver Pulser. Shown here is our latest model, the model SP7.

Inserting the Battery

The Silver Pulser is powered by a 9 Volt alkaline style battery, shown here. Now the battery that comes with your unit may have a protective covering over the terminals. Please make sure that you peel that protective covering off in order to expose the battery terminal so they will connect within the unit.

Now, I'll show you what it looks like with the protective covering removed. As you can see the terminals are now open. Please remember, to always use an alkaline style battery and not heavy duty. Heavy duty batteries do not have the deep capacity that is required to run the unit to full efficiency. You can also use rechargeable batteries and I will talk about those in a little bit. To insert the battery into the unit, take your unit and turn it over, and on the back here we see the battery compartment lid. You simply slide that off and if you look inside, there are two plastic rings with indicators on them. There is a lower larger ring with a minus indicator and smaller upper ring with a positive indicator and that helps us to align the battery. And inside you see two metal prongs. Those need to come in contact with the battery terminals. Before we put the battery in, we need to make sure those are pulled forward, if they are not already, so they make good contact with the battery. Now they are spring metal and you simply just take your finger, grab the corner of it and just pull it forward—and just so it is at an angle that will contact the battery properly.



On the battery, of course, there are two terminals—the bottom one is the lower negative terminal, the larger one, and at the top is a smaller positive terminal. You simply line them up in this fashion. Slide it in, click it into place, put your battery lid back on, turn the unit over, and I'll turn the unit on. And you should see a green ON light. That tells me the unit is ready to go and the battery is working just fine.

Using Rechargeable Batteries

Now with rechargeables; I have here a nickel metal hydride 9 Volt rechargeable battery. This has a capacity of 250 milliamp hours and that capacity rating tells you basically how much energy is contained within the battery. If you get a battery with a higher milliamp hour rating, the battery will simply last longer. Now, there are also different types of chemistries, like nickel cadmium. They may not last as long, but both of these, of course, work quite well because you are not going through batteries like alkalines.

Alkalines may actually have a longer life because they hold a deeper cycle. And one thing about rechargables that you need to make note of is, although they are all the same shape, the size differences come into play here because of different tolerances and we have no control over that. And so, if you are going to buy a rechargeable battery, please if you have the opportunity, put the battery in the unit first to make sure it fits. Because it may be a little bit larger and may not fit the unit and you don't want to be committed to buying something, let's say over the internet if the battery doesn't fit in properly. Other than that it works really well.

Using a Wall Adaptor

When making Ionic~Colloidal Silver, you do have the added option of using an external power supply like a wall adaptor—an AC–DC wall adaptor shown here. Now the wall adaptor that we have here that you can purchase from SOTA is rather unique. First of all it has a universal input, meaning that you can use this in any country, but what is important is that you purchase it with the blades that fit the wall socket in your country. And what is unique about our little wall adaptor is you can pop the blades out and put the new one in for your country. The Silver Pulser requires 6-12 Volt DC input at a minimum 500 milliamps center positive. Our wall adaptor is rated at 12 Volt DC output, 1500 milliamps, which is 1.5 amps, and a polarity center positive. So, of course, it is perfectly suited to run the unit. So it is very important that if you don't use our wall adaptor, that the wall adaptor that you have needs to have the polarity as tip or center positive in order to properly work with the unit. The barrel is 2.1 mm center or tip positive.

If the polarity is reversed, it won't hurt the unit but the unit just simply won't turn on. To use it on the unit is really simple. At the end of the Silver Pulser there is a jack for the DC power supply and you just plug it into place. Now you can keep the battery in the unit, it won't be harmed because internal circuitry will bypass the battery as you are using the external wall

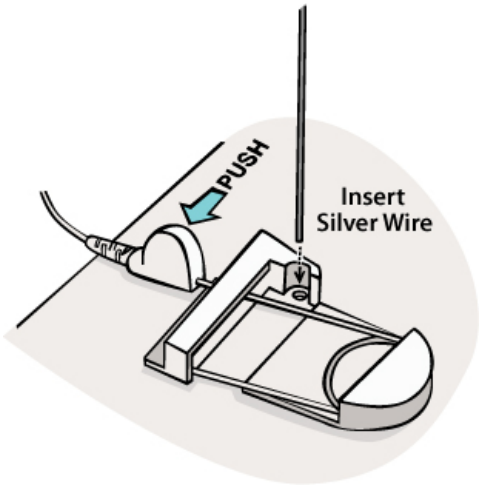
adaptor. Or you can take the battery out, it is your choice. For our demonstration purposes here I am just going to leave the battery in the unit and not use the wall adaptor.

Low Battery Warning

The Silver Pulser has a low battery warning indicator. It is a red light that comes on at the bottom of the unit. At the same time there is also an audible beep. It is going to beep a few times to let you know it is time to change the battery.

Connecting the Silver Wires to the Silver Wire Holder

Ok, our next step now is to connect the silver wires to the silver wire holder and we are going to then plug the silver wire holder into the Silver Pulser unit. Now the silver wires that come with your unit are very high grade purity, they are 99.99% pure fine silver—that is the equivalent of .9999 grade. You can go as low as 99.9%, which is the same as .999 grade, but never use sterling silver as that has toxic impurities within the silver.

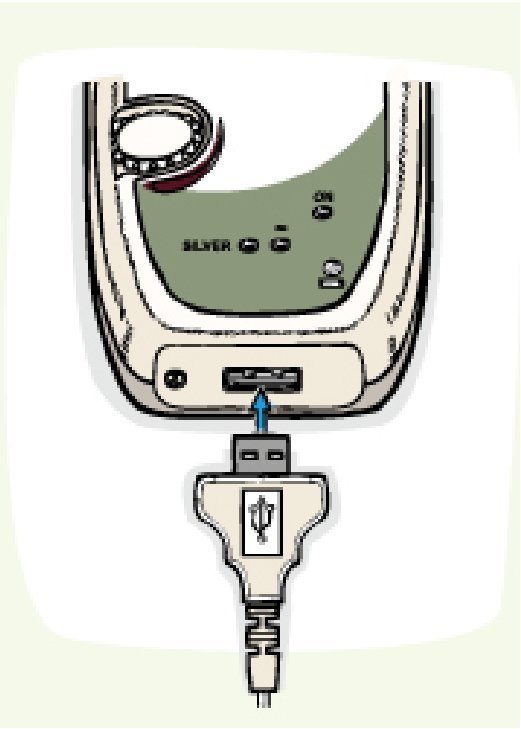


Using the silver wire holder, just undo the wire here, we have two little lever clamp mechanisms on the top side, and by moving the lever sideways, it actually clamps the silver wires that are pushed into the holes and I flip it over, and you see there are two holes in the bottom. I mean it is very simple, you are going to take a silver wire, you are going to put it into the hole, flip the unit over and move the lever and clamp the wire. I'll do that with the second one. Turn it over, put the silver wire in there, move the lever, and it holds it into place. As you can see it's adjustable by pulling the wires up and down or you can just move the levers and reposition the wires for the height that you need and we will talk about that later.

Connecting the Silver Wire Holder to the Unit

Now the other end of this silver wire holder, of course, is our USB connector. Now the USB connector is specific to our purposes. Never plug that into a computer and don't use a computer USB to plug into the Silver Pulser unit.

On one side of the USB connector, we have the USB symbol, and on the other side it is blank. The side with the symbol is, I'm trying to show you the top of the connector, and to plug it into the Silver Pulser unit, it is real simple. We have the USB jack on the end of the unit and we turn it over in this fashion, I'll turn the unit on, and when you turn it on for making Colloidal Silver, of course the green light comes on. You don't need to turn the volume up or the intensity. Just turn it on. It is a completely different circuit than the Micropulsing circuit.

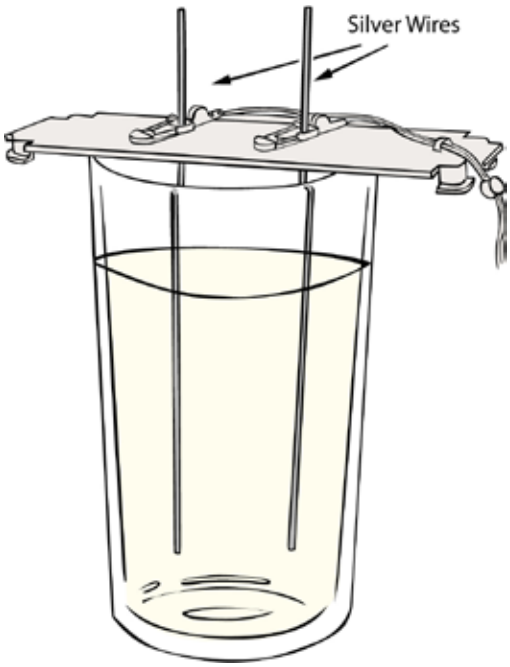


Testing Silver Wire Connection

At this point though, I do want to test to make sure that the silver wire connection is working. I am going to take the two silver wires and cross them and connect them—touch the two together like this. You should see the orange light come on, on the Silver Pulser unit. That tells us that the silver wires are making good contact to the silver wire holder and that the USB connection and the unit and the circuitry is working perfectly. At this point in time, please make sure that your low battery warning light isn't on because then, of course, you will have to replace the battery. And at this stage we are actually ready to make Colloidal Silver.

Making Ionic~Colloidal Silver

Ok, we are actually ready to start making the Colloidal Silver. I have a glass here which is filled with 16 ounces which is 2 cups, 500 ml of distilled water. I want to talk about the water because it is really, really important for you to know this. We want to make sure that we use the purest water possible and distilled water has the least amount of impurities in it. We don't want to use reverse osmosis, filtered water, tap water, spring water because these types of waters have minerals or salts that could increase the conductivity of the water—adding impurities and actually not producing the kind of Colloidal Silver we want. We actually will have problems with it later. So, always use distilled water. Even with different brands of distilled water, you'll find that some are more pure than others. So that is always going to be the mitigating factor when making Colloidal Silver.



The silver wire holder, as we did previously, of course has got the silver wires in place and it is real simple. You put the silver into the glass on the holder. You want to make sure it is centered in the glass itself. And also make sure that the bottom of the silver wires are about an inch or an inch and a bit from the bottom. If it is too low, you just simply adjust it slightly by pulling the silver wires up and I'll do it like that. If it is too close to the bottom of the glass or too close to the sides, due to electrostatic attraction you may get some colloidal silver build up and it doesn't disburse properly in the glass itself, so just try to keep it equal distance around.

The next step of course is to simply turn the unit on. You turn the unit on and the green light comes on and right away you should see the orange light for silver. That tells us that there must be a current flow through the silver wires, through the water and into the unit and turning the light on. We are actually making Colloidal Silver right now.

If your water is very pure—in other words if you have an extremely high purity distilled water—that silver light may not come on to its full intensity for maybe 10-15 minutes. Don't be alarmed, it is just building up and it will eventually reach its full intensity after about 15 minutes.

The process that we use for making our Ionic~Colloidal Silver is called a constant current method. What that means is the silver comes off the silver wires at a very, very controlled rate. And we make very pure silver with that method. With that method though, we don't have any starters, we don't boil the water, we don't add salt, we add no impurities whatsoever. But the brewing time then is two hours for 16 oz, 500 ml, two cups and we will get, oh, about 5-8 ppm. At the end result, we will see a color change in the water—it might be clear, it may be going to a pale yellow, or a deep golden color. I am going to put the unit down for a second.

As I am looking at this, I can see bubbles forming on the wires that tells me that the solution is actually brewing and in about maybe I'll say about an hours time, you might want to clean the wires of some residue. You may get some oxidation build-up because we are dealing with water H_2O, there is oxygen and we are dealing with silver.

It is real simple, you simply take the silver wires out of the glass—just get a tissue paper and wipe them clean. And you may have a bit of residual on the tissue paper, and then—now this is interesting—let me show you now, the light is of course turned off because the silver wires have been removed. When we place the silver wires back in the water, the light will come on again. Please make sure it does. At this time you might want to just swish the water around just to evenly disburse the ions and continue the process.

Again, I mentioned that it goes for two hours. When we brew it for two hours, we are going to the point where we reach the 5-8 ppm. It is actually fairly constant, if we have the correct water, we need distilled water and it is very high purity and we may get a slight color change. As I mentioned before, it could go to a slight golden color or even a little bit of a yellow color. It could also be clear. It's still good Colloidal Silver.

We know it's working because the light for silver is on. If you go past the two hours, what happens is that you start getting more particles of silver in the solution and what that does is it creates a color change and it also increases the ppm so now you might be going from between 5-8, you may go from 8-10, 8-12. So it is not terribly bad, it just means that you are going to put more silver in the water the longer it brews. So, we kind of like to stick to two hours because we know it is going to give you consistent results.

Now, if there are problems with the water or any kind of impurity, the color change may go to a deeper yellow color. Quite a bit deeper. It could even be a like a rusty color, and if you have some issues, it could even have more of a black or grey color. And I am going to go over the different colors later on in the video, but for now, if after two hours it is nice and clear; a slight golden color or that just pale yellow, you're making really good Colloidal Silver.

So, we are doing really well here. After you have brewed for two hours, you just simply turn the machine off, take your silver wires out of the solution and of course wipe them down with your tissue paper. I can already see oxidation built up on the wires and I will be cleaning the wires a little bit later on. Then we are done and ready to go.

Cleaning the Silver Wires

Over time you may find that your silver wires have either tarnished or oxidized. Now this is normal, expect it as part of the process. The oxidation occurs because we have oxygen being released in the water when we're brewing the Colloidal Silver. The oxygen comes in contact with the silver and you get silver oxide. So I have some wires here and this is ah, its got a bit of residual build upon it, there are some oxides on this. So the first thing you do is just grab a tissue paper and just remove whatever is on the surface of the wire. And if you still need to remove more oxides or tarnish, grab a green scrubby and just pinch the wire and run it down the wire a few times and turn it around and do the other side and when you are done, just wipe it clean again with the tissue paper. And it is important that you don't want to keep scrubbing it to where you are getting rid of good silver, you just want to get the layer of oxide off and then you are basically ready to go for the next session and that is as simple as that. And you keep your wires nice and shiny.

Extending the Life of Silver Wires

Now making the Colloidal Silver requires silver is removed from the silver wires. Makes perfect sense. We put electricity onto the silver wires and one of the electrodes, one of the wires is going to give up the silver and that silver is going to go into the water. So over time, that particular electrode on the one side will wear out and eventually will become quite thin. But the other side won't because it is the return electrode. So if you want to actually double the amount of silver that you are getting from your silver wires, take the wires out and reverse them. Now you can use the thicker wire on the side that will be giving up the silver into the solution and now you will be able to wear that one down and almost basically double the life of your silver wires.

How Ionic~Colloidal Silver Should Look

Ok, I'd like to talk to you now about the different colors of Colloidal Silver and different Colloidal Silvers that you may find will be brewed when you are doing it yourself. I am going to use a white sheet of paper to help illustrate this a little bit better. So here is our first three

glasses. The first one is clear. And it is actually very high quality Colloidal Silver, although how do I know there is silver in there? I take a drink and I would have that tell-tale taste of the bitter metallic Colloidal Silver taste that is kind of like at the back of your mouth. So at least I know there is silver in there. This is actually virtually perfect. The next one over is slightly golden or just a nice yellow hue. Wonderful Colloidal Silver. And the third one here is a little bit darker hue; it's a little bit more golden. Beautiful. These three are absolutely fantastic. They are going to fall within the range of 5-8 ppm.

Now if we go over to glass number four we see that it is quite a bit darker yellow. This one has simply more ppm amount of silver in the glass so it's going be a little bit darker. It is still great quality, but if you are wanting to stick to the 5-8 ppm range then you want to do one of these three glasses and get it to that color. So I just want to show you that this one here is still excellent, it just happens to have more silver in it.

Now let's take a look at number 5. Number 5 is where we would kind of draw the line. At this particular color it's a more of a darker grey, you may even see some flecks of oxides in there. So what's happened here? A number of things that could contribute to this. One, you may have the wires too close to the sides or too close to the bottom and some silver oxide may have built up. You may have left it out in the sunlight or light too long and the silver has oxidized and fallen out of solution or precipitated out. This may have been done too long; it may have been brewing for four or five hours and left unattended. But most likely if the brewing process is held constant and it is very easy to do, chances are it's the water. You want to use distilled water, and always use distilled water. You don't want to use reverse osmosis, filtered water, spring water, or any other kind of water other than distilled. Distilled water has the least amount of impurities and we are trying to get the purest amount of Colloidal Silver so we don't want to add impurities that combine with the silver ions. And this particular water, even though it could be made from good quality distilled water, there is still variances in the distilled water that you get from different manufacturers. You may not go to this extent, but when you look at the distilled water in a store, there are different brands and they may actually be purer amongst different manufacturers. We look for steam distilled water, that works very, very well. You may have your own distiller at home, a stainless steel distiller. That may produce really good quality distilled water, but there may be some ions in there from the metal, the stainless steel of your distiller, that causes impurities.

So even though you think it is very, very pure, when you are making the brewing process with Colloidal Silver you may get some flakes or some unusual colors like this. So really look at the water, it is usually the mitigating factor. So again basically with this last batch I would probably just pour it into my plants or discard it. I would not be drinking this one. This one and the rest are fine to drink and it depends like I say, if you want to maintain the 5-8 ppm then glass 1, 2 and 3 is for you.

Storing Ionic~Colloidal Silver

Ok, now how do you store your freshly made batch of Ionic Colloidal Silver? You need to use dark glass bottles. We want to make sure we use glass bottles, because glass is really the perfect storage medium—there are no impurities and nothing leaches in or the silver doesn't get pulled out. If you use plastic, of course, you have that plastic polymer that could leach into your Ionic~Colloidal Silver or the plastic itself could have an electrostatic charge and draw the silver out of the water. It may not have any silver left. It is important to note that silver is actually very light sensitive, so you want to make sure that it's in a dark container. Now if you don't have access to dark glass bottles, if you just have clear glass bottles, you can put a dish towel over it and keep it in a cupboard. Shut the cupboard door, keep the ambient light away. You certainly don't want to expose it to sunlight. It's really going to wreck the Colloidal Silver, but even just ambient light, over time will reduce its potency. So, you can even wrap tin foil around it or use duct tape for heaven's sake, so there is many ways you can keep the light out of the container.

We don't want you to store it in the refrigerator, it is best at room temperature, in a dry dark place. When you store the silver, you can, as I told you there are two different sizes, depending on what you have brewed, the silver will actually hold its potency fairly well if it is stored properly. And you may get two weeks to a month or so of your silver still maintaining its potency quite well. We have silver that we made back in 1998 and we tested it and it still has probably about 70% of its potency left so it actually holds its charge pretty well. The best thing to do is make it fresh, store it and use it up as quickly as possible to have the highest level of charge and potency available to you.

Making Larger Quantities of Ionic~Colloidal Silver

Ok, so let's say you want to make a larger quantity of the Ionic~Colloidal Silver. Now keep in mind that the recipe that we have that is making 2 cups, 500 ml, 16 oz is a tried and true method. You are going to get very precise results, 5-8 ppm. It's going to be very repeatable and so that is going to work very well for you. But let's say you want to do double that. You want to do 4 cups, 32 oz, 1 litre which is basically double – it is double the time, it is a linear relationship. However, if you want to go past that and you want to make a gallon, you start getting into non-linearities. In other words, it is not double that time from 4 hours to 8 hours – it's just not going to work that way. So what you need to do, and this is more of a guideline, because we do have more information on the web to help you with this, but as a guideline what you need to keep in consideration is you may have to stir the Ionic Silver more frequently.

You need to watch for build up of the silver; you may see it accumulating a little bit more. You may have to take the silver wires out and you may need to clean them more often. And also, you need to be very careful watching the color. We want to be in that realm of clear,

slight golden to golden which I showed earlier. So if you are in that realm and you are able to control that, you are going to make some pretty good Colloidal Silver, just larger batches. So good luck with it and I think you'll find that useful.

Note: This video and the transcript are intended to complement the product manual that accompanies your unit. Please be sure to read the complete product manual before using your unit.