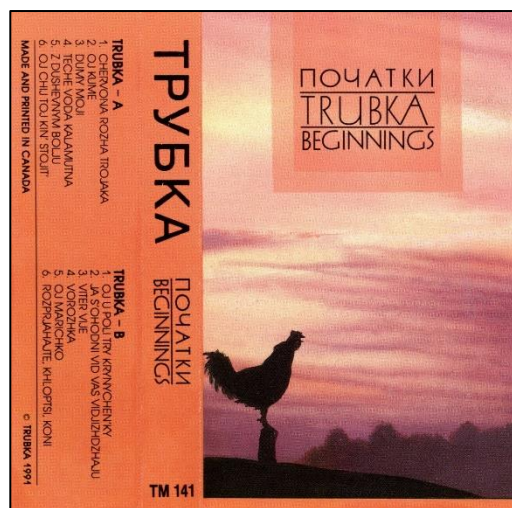


Digitizing Ukrainian Canadian Heritage Music

A couple of years ago, while dropping off some items at the Edmonton Reuse Centre, I noticed a table full of old cassette tapes. One of these cassettes had traditional Ukrainian folk music and songs by the Edmonton Band *Trubka*. Their album *Beginnings* was produced in 1991 as a centenary project commemorating the 100th anniversary of Ukrainian immigration to Canada (1891 – 1991).

I asked a staff member how much they wanted for the cassette. The response was “Take it, otherwise we will throw it into the garbage.” That answer did not sit well with me – somehow that felt disrespectful of the many sacrifices that my grandparents and other Ukrainians settlers had made. Their hard work and dedication built this country, and their efforts contributed to making Alberta and Canada a great place to live.



When I got home, I rummaged in the basement and found a *Boombox* (with cassette and CD players) that we had purchased for our daughters many years ago. I listened to the *Beginnings* cassette. The audio sounded quite good, considering it was over 30 years old. I really enjoyed listening to that music.

That got me thinking. Back to the basement I went, and found several boxes of old LP records. Going through them, I discovered that over 65 of them were Ukrainian music. There was a variety of music types. Many of the records we had purchased over the last 50 years; the rest we inherited from both set of parents when they passed away. I no longer owned a record player, so I could not listen to any of this music. I also wondered what would happen to this collection of heritage Ukrainian music when we were gone.

It dawned on me that a major part of the problem was the media used to record and play this music. Between about 1910 and 1950, the prime media was 78 RPM records. These only had room for one track on each side. Around 1954, 33 RPM LP (long play) stereo records were introduced. These allowed up to 25 minutes and multiple music tracks per side. Shortly afterwards, came the 45 RPM record, the cassette tape, the 8-track tape, and finally the CD (compact disc). The CDs were the first to use digitized data.

The problem is that all these technologies are now becoming obsolete! Yes, you can still buy a turntable to play your records, and some older computers still have CD drives. But the reality is that these devices are becoming rare. This means that we, as a society, are losing our ability to listen to, and enjoy the wealth and diversity of the Ukrainian music that was produced and played in the last century.

The solution is simple – convert the analog music files to a digital format, i.e., digitize the music. Once digitized, the music can be listened to with many current and future devices such as mobile phones, tablets, laptops, and desktop computers (all now sold without CD drives).

How hard can it be to digitize music from the older media? I was about to find out! But first, in the interests of full disclosure, I have the latest computer technology and software, as well as extensive experience in developing websites, videos, online courses, etc. So, I figured it should not be too difficult.

Fortunately, the *Boombox* had a “line out” plug. Using the appropriate cable, I plugged it into my Scarlett USB audio interface that is connected to my computer. I then opened my *Acoustica* audio software and clicked on *Cleaning Wizard*. This feature is designed for recording audio from an analog source. I then turned

on the cassette player, and hit the record button. The music from the cassette was digitized and recorded in a *wav* format (uncompressed for best quality) on my computer. Once the recording was finished, I labelled the individual tracks, and set the parameters for “cleaning” (decrackle, declick, posive and thump removal, and dehum). The audio was then processed and saved to a folder on my network drive.

This process usually has acceptable results in terms of audio quality. However, I take a few more steps to make it sound even better. I open the individual audio tracks and normalize the audio using the EBU R-128 standard to ensure consistent loudness across tracks and albums. Then each music track is processed for multiband dynamics (to level out the music by removing any extreme low or high frequencies). Finally, each audio track is processed by a *declick* filter. This further removes crackles, clicks and static noises. Sometimes the audio file must be filtered two or three times to remove all the noise. The final result is usually very clean sounding voices and music, often better than the originals.

Lessons learned

Here are some things I have observed and learned about digitizing. It is time consuming. You have to record in real time. It takes about 2 to 3 hours to do a single LP. Remastering significantly improves the quality of the final audio. Interestingly enough, although CDs are already digitized and supposedly have clean audio, I found that even their sound can be improved using the processing described above. Also, my understanding was that the audio on cassette tapes deteriorated after 7 to 10 years. However, I have digitized a cassette tape that was over 40 years old, and was able to obtain excellent results. Old cassette tapes are certainly worth checking out.

To get a commercial firm to do the digitizing for you, the cost is \$75 an hour. So, you will likely have to pay approximately \$100 for just one album. This probably does not include any remastering to improve the audio quality. A firm in Ottawa charges \$12 to digitize a 78 RPM record (two songs).

If you want to do it yourself, excellent USB turntables are available for \$300 to \$400. You can plug these directly into your computer. For the audio software, *Adobe Audition* is often recommended. But it is expensive and is only available via subscription. I prefer *Acoustica 7* (one-time reasonable fee) or the open-source *Audacity* (free and very good). To learn more about how to digitize your LP records, check out the many *YouTube* videos.

Over the last year or so, I have upgraded my turntable to be able to digitize 78 RPM records. Recording these requires a different stylus as the record grooves for 78s are wider than for modern LPs. I was able to successfully digitize one Ukrainian 78 record that was produced in 1913 (100 years ago). After remastering and running it through the *declick* filter several times, the audio was certainly acceptable.

As of this writing, there are over 80 digitized albums in our *Music Library* at our *Pioneer Churches* website. To listen to this heritage Ukrainian music, please go to: <https://pioneerchurches.ca/music>

Russell Sawchuk
[Pioneerchurches.ca](https://pioneerchurches.ca) | [Steppingstones.ca](https://steppingstones.ca)

This article originally appeared in the December 2023 / January 2024 edition of Promin magazine (page 24).