

# ProtoTapes

Russian Electroacoustic Music from the 1930s -2000s

The most fertile and adventurous period in the history of sound experiments in Russia is arguably from 1910 to the late 1930s, when they were developed around avant-garde ideas. The theremin, noise orchestras, graphical, ornamental and paper sound, syntones and audio computing, — these are just some Soviet experiments in sound art and technology that have since then been left buried deep in the archives of history. The work of the pioneers of sound art was cut short by Stalin's totalitarian regime as they often did not fit in with the regime's vision and were outside of officially accepted aesthetics or any state priorities.

For the first time an opportunity to realise the most radical ideas in sound arose in the late 1920s with the development of the sound-on-film technologies when the artists fascinated by the idea of sound as an art medium had the long-awaited opportunity to edit, process, mix and structure prerecorded audio material combining any sounds at will. Another important instance of the new technology was related to the possibility of the access to sound as a visible graphical trace in a form that could be studied, manipulated and reproduced artificially by graphical means, opening an opportunity to synthesize any desirable sound. It led to production of numerous artificial graphical soundtracks as well as soundtracks, created by means of noise orchestra combined with the newest electronic instruments, such as the theremin and different harmoniums, integrated into the symphony orchestra with an extensive use of the extended performing techniques.

In 1929 Abram Room - the director of the first Soviet experimental sound movie 'Piatiletka', which soundtrack was created by Arseny Avraamov, - wrote about his experience of the production of the film: 'The visual material played for us a secondary, supporting role, being an outline for sound design... each of us had to apply himself to the theory of radio and acoustics.' The film critic Alexander Andrievsky noted in 1931: 'While abroad the first works related to sound cinema were mainly based on music material, in the USSR we had another trend. The main audio material of the first sound movies was based on noise and various rumblings.'

In the early Soviet sound films the most popular approach was '*the CONTRAPUNTAL METHOD of constructing sound film*' formulated by Sergei Eisenstein, Vsevolod Pudovkin and Grigori Alexandrov in 1928: "...Only a *contrapuntal* use of sound in relation to the visual montage piece will afford a new potentiality of montage development and perfection. The first experimental work with sound *must be directed along the lines of its distinct nonsynchronization with the visual images*. And only such an attack will give the necessary palpability which will later lead to the creation of an *ORCHESTRAL COUNTERPOINT of visual and aural images*..."

Majority of sound films produced in the early 1930s were shot as silent with soundtracks added later in studios. It led to the creation of self-sufficient soundtracks, and aesthetically was very close to the future Musique Concrete, invented by Pierre Schaeffer in France in 1948. Being based on the contrapuntal method, these soundtracks became masterpieces of early sound art.

The Stalin era was characterised by bureaucratic control and the reign of Socialist Realism in all fields of the arts including music. The ideological doctrine of 'Socialist Realism' was proclaimed in 1934. It was explained as a 'truthful and historically concrete depiction of reality in its revolutionary development'. In musical terms, this demanded the composing of patriotic, elevating scores, preferably with topical or folkloric content, that were supportive of the Communist ideology and the regime, as well as simple and accessible for the 'masses'. All experimentation or deviation from these ideals was branded as 'formalism', and condemned together with the 'decadent music of the rotten West'. This policy resulted in the State campaign against experimental music and art as well as many areas of experimentation and advancement in science and culture throughout the 1930-40s.

However, the development of sound cinema in the USSR completely overlaps with a period of transition from a revolutionary utopia of the 1920s to the new realities of the totalitarian epoch of the 1930-50s. Terminating the New Economic Policy, initiating the wide campaign for liquidation of the independent creative unions, which were substituted by the highly centralised unions as a way for total control over intellectuals, fast growth of censorship, reprisals, struggle against "formalism", etc. led to a complete disappearance of experimental soundtracks by 1936.

Although majority of the laboratories involved into the Graphical Sound research were also closed by 1936, the Laboratory for Graphical Sound headed by the inventor of 'Variophone' Evgeny Sholpo exists until 1950. The only survivor and the last unique invention, related to the Graphical Sound, was the ANS synthesizer, which was built in 1957 by the inventor Evgeny Murzin. In 1967 in Moscow, with the ANS Synthesizer at its core, the Experimental Studio for Electronic Music was established. Among the composers working with the ANS were Alfred Shnitke, Sofia Gubajdulina, Edison Denisov, Eduard Artemyev, Alexander Nemtin and Stanislav Krejchi. The instrument was used for scoring many films, in particular, the early films of Andrey Tarkovsky. Despite its happy destiny, the ANS Synthesizer was the last original and significant development in the realm of music technology to be made in the USSR.

1. Nikolai Timofeev / Evgeny Sholpo - **Waltz** (Graphical Sound, 1935) - 0:45
2. Nikolai Krukov / Vladimir Popov - **The Training** (Noise, 1932) - 4:40  
Excerpt from the film 'Affairs and People' by Alexander Macheret
3. Georgy Rimsky-Korsakov / Evgeny Sholpo - **The Carburettor Suite** (Graphical Sound, 1933) - 4:00
4. Nikolai Krukov / Vladimir Popov - **Construction of the Electric Plant** (Noise, 1932) - 5:30  
Excerpt from the film 'Nice Life' by Boris Yurtsev.
5. Georgy Rimsky-Korsakov / Evgeny Sholpo - **March - Trot - Gallop** (Graphical Sound, 1933-34) - 1:40
6. Gavriil Popov / Vladimir Popov - **The Air Fight** (Noise, 1936) - 6:00  
Excerpt from the film 'Motherland Calls' (1936) by Alexander Macheret
7. Igor Boldirev / Evgeny Sholpo - **The Vultures** (Graphical Sound, 1941) - 5:20
8. Alfred Schnittke - **The Stream** (ANS, 1968) - 6:00
9. Yuri Popovsky - **Stalingrad** (1997) - 13:00
10. Andrey Smirnov - **Sonograms** (1999) - 10:00
11. Sergei Zagni - **Anthems and Requiem** (1998) - 6:00

## COMMENTS

The concert program is based on the tape music which was composed as a fixed medium much before any tape recorders were manufactured. Most of pieces included in the program were never performed in concerts or broadcasted. Several contemporary pieces, included in the program, are based on or influenced by aesthetics and technologies of their predecessors.

1. *Nikolai Timofeev / Evgeny Sholpo - **Waltz** (Graphical Sound, 1935) - 0:45*
3. *Georgy Rimsky-Korsakov / Evgeny Sholpo - **The Carburettor Suite** (Graphical Sound, 1933) - 4:00*
5. *Georgy Rimsky-Korsakov / Evgeny Sholpo - **March - Trot - Gallop** (Graphical Sound, 1933-34) - 1:40*

When in October 1929 the idea of Drawn Sound was voiced, Evgeny Sholpo proposed to Alexander Shorin, the chief of the Central Laboratory of Wire Communication in Leningrad, a research project about synthetic Graphical Sound production. In the autumn of 1931 the Bureau of Realization of Inventions at the Lenfilm Studios agreed to fund the construction of the first simplified version of the Variophone, which was finally built by Sholpo together with Georgy Rimsky-Korsakov in 1931. At the end of the summer of 1932 Sholpo and Rimsky-Korsakov produced a synthesized soundtrack for the new colour cartoon '**The Symphony of Peace**' by Ioganson and Georgi Bankovsky and in the autumn of 1933 they made a soundtrack for the educational film '**The Carburettor**' with music composed by Georgy Rimsky-Korsakov. Only the soundtrack survived.

Among their most accomplished pieces recorded with the Variophone in 1933-35 were '**March - Trot - Gallop**' by Georgy Rimsky-Korsakov, '**Waltz**' by Nikolai Timofeev, '**Flight of the Valkyries**' composed by Richard Wagner, and '**6th Rhapsody**' composed by Franz Liszt.

While much early popular electronic music has a rigid, metronome-like tempo, Sholpo was able to simulate more subtle variations in rhythm such as rubato, rallentando and accelerando, based on his careful analyses of live piano performances by some of the leading pianists of the day..

2. *Nikolai Krukov / Vladimir Popov - **The Training** (Noise, 1932) - 4:40*  
*Excerpt from the film 'Affairs and People' by Alexander Macheret*

The film **Dela i ludi (Affairs and People)** directed by Alexander Macheret is an example of magnificent but underrated, censored and largely forgotten work. It was the first sound movie produced by the Mosfilm company in 1932. It is interesting that the soundtrack was created by a team that included one of the most influential Russian 'classical' composers, Vissarion Shebalin (the Rector of Moscow Conservatory in 1942-48), film composer Sergei Germanov and Nikolai Krukov as well as the leading noise technologist Vladimir Popov. The result proved to be both extraordinary and futuristic. It is not surprising that the Theremin was also utilized in the production of the soundtrack as an extension of the noise orchestra. The main concept developed in the film - music should be accompanied by noises and be born from them.

4. *Nikolai Krukov / Vladimir Popov - **Construction of the Electric Plant** (Noise, 1932) - 5:30*  
*Excerpt from the film 'Nice Life' by Boris Yurtsev.*

Perhaps the most 'condensed' noise music of this period can be found in the film **Iziashnaya Zhizn (The Nice Life, Rosfilm, 1932)** by the film director Boris Yurtsev with the music composed by Nikolai Krukov, which includes beautiful theremin tunes as well as various exciting noise parts, created by a whole brigade of 'shumoviks' (noise makers) — their credits in the film titles take up more space than the cast list.

6. *Gavriil Popov(?) - The Air Fight (Noise, 1936) - 6:00*

*Excerpt from the film 'Motherland Calls' (1936) by Alexander Macheret*

'Motherland Calls' is an unexpected example of film with a very tensed noise soundtrack produced in 1936 when the aesthetics of noise music was almost forbidden in the Soviet cinema. While in the titles of the first Soviet films incorporating noise soundtracks the credits related to noisemakers took up more space than the cast list, after 1934 they were never mentioned. It is the case in the film 'Motherland Calls'. We know only the name of the composer - Gavriil Popov. There are no confirmations found yet that the noise soundtrack was composed by Popov himself. It is based on the several layers of very condensed microtonal textures composed with a tutti of brass instruments combined with a noise orchestra, merged with a long low pitch sounds of the theremin and definitely required very high skills in composition and instrumentation, including the knowledge of the early electronic musical instruments. Meanwhile Gavriil Popov was considered to have the raw talent of his contemporary Dmitri Shostakovich and he was one of the first to compose a piece for the theremin and symphony orchestra for the film 'Komsomol is the Chief of Electrification' (1932).

The film was produced in 1936 as a kind of 'science fiction' predicting the future war. According to the film the future enemy was expected to be German Nazi. When political trends changed in 1939 the film was banned and never mentioned in the Soviet official filmography.

7. *Igor Boldirev / Evgeny Sholpo - The Vultures (Graphical Sound, 1941) - 5:20*

In 1941 during the blockade of Leningrad, together with composer Igor Boldirev, Evgeny Sholpo synthesized by means of the 2-nd version of Variophone one of his most experimental pieces — the soundtrack to the cartoon '**Sterviatniki' (The Vultures)**. As a fee they were given a sack of oats, which was gratefully received because they were in the middle of a terrible famine at the time. The film was lost, but the soundtrack survived in the private archive of Marina Sholpo - the daughter of the inventor.

8. *Alfred Schnittke - The Stream (ANS, 1968) - 6:00*

The piece '**The Stream**' was composed by Alfred Schnittke in 1968-69 by means of the ANS Synthesizer at the Experimental Studio for Electronic Music located at Scriabin Museum in Moscow. The piece was composed in the form of canon. The sequence of natural intervals starting from the first overtone up to the sixteenth becomes its theme. Gradual stratification of voices of a canon leads to the climax point, and then gradually calms.

The ANS Synthesizer is a photo-electronic musical instrument based on the principles of Graphical Sound and Optical Synthesis. Its name was derived from the initials of influential composer Alexander Nikolayevich Scriabin. It is based on a set of 720 optical sine wave oscillators, covering the whole audible range. Control over the process of sound synthesis is carried out by means of a special graphical score with the diagram, representing a dynamical spectrum of a sound. A similar principle of the graphical score was used in the legendary UPIC computer system, developed by Iannis Xenakis in 1977 in the Parisian CEMAMu.

9. *Yuri Popovsky - Stalingrad (1997) - 13:00*

A soundtrack of the film is based on the various electric background noises, clicks and distortions while a visual part represents continuous examining of a huge figure of the statue of Victory (created by the sculptor Evgeny Vuchetich) in Stalingrad (now - Volgograd) by means of a moving camera. While the initial material is absolutely concrete - the result is unexpected and ominously abstract. As a consequence of the minimal means the time, dynamics and the image/sound counterpoint form the basis of the structure. In a hopelessly-continuous alternation of movements there is an absolute, invincible logic. At total absence of any narrative in the film bewitches and compels to reflections.

10. *Andrey Smirnov - Sonograms (2001) - 10:00*

In this piece a sequence of graphical images based on constructivist art works by K.Malevich, A.Ahtirko, A.Rodchenko was processed as a sonogram - representation of the dynamical spectrum of sound. A visual part of the work is based on the real time recording of the process of transformation of sonogram into the audible sound.

The second layer of the composition is based on the well-known slogans by Alexander Rodchenko: "Design means Organization of Elements", "Design is a Modern Outlook", "Art is one of the branches of Mathematics", "Constructive Life is an Art of the Future". The texts were typed and integrated into the graphics of the sonogram.

#### 11. Sergei Zagny - **Anthems and Requiem** (1998) -

The piece Anthems is composed with 29 different national anthems. It begins with all anthems starting simultaneously and finishes when the longest anthem comes to the end. The piece has gained the Guinness World Record for the highest concentration of anthems in time.

The Requiem consists of two layers: the piece Anthems is transposed down so that no anthems are recognisable anymore. It sounds like an earthquake and forms a kind of 'basement' for the second layer, which is based on a sequence of anthems transposed 6-7 octaves up and playing in the alphabet order. The piece also gained the Guinness World Record as a saddest composition in the world. It symbolises the remainder after the ambitions of all states will be realized - i.e. the remainder when nothing remains.

Sergei Zagny is a Russian composer of interdisciplinary works that have been performed in Europe and elsewhere. He studied composition with Albert Leman and music theory with Vsevolod Zaderatsky at the Tchaikovsky State Conservatory in Moscow from 1983–88, where he had postgraduate studies in composition with Albert Leman from 1988–91. As a performer, he improvises on non-traditional instruments, organ and piano. He has taught analysis, harmony and polyphony at the Tchaikovsky State Conservatory since 1992.