

COVID-19

GOOD PRACTICE GUIDE

for music stores / instrument workshops / musicians



PIANOS HARPSICHORDS KEYBOARD INSTRUMENTS

(non electronic)



AU SERVICE DE LA MUSIQUE DEPUIS 1890



Institut technologique européen
des métiers de la musique



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These recommendations are based on the current knowledge and are provided for the time needed to manage the COVID-19 pandemic.

Always maintain a minimum distance of 1.50m from any other person.
Wearing a mask is mandatory in public transportation and recommended when moving inside the shop or the workshop when several persons are present.



CONTENTS

ANY TYPE OF KEYBOARD INSTRUMENT (non electronic)
UPRIGHT AND GRAND PIANOS, HARPSICHORDS

**PLEASE READ THE MATERIAL SECTION
IN THE STUDIO PA & COMPUTER MUSIC GUIDE FOR FURTHER INFORMATION ABOUT
PLASTIC PARTS ON ELECTRONIC PIANOS**

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GENERAL PRINCIPLES

IMPORTANT REMINDER: This disinfection recommendation guidance must only be followed if you believe you have been in contact with the virus. We recommend, however, that you pay special attention to the different lacquers and parts of the instrument, and ideally contact your manufacturer.

When trying an instrument in a store or workshop, should the musician washes / disinfects their hands correctly, wears a face mask and washes / disinfects their hands once again after trying the instrument, the risks of virus transmission between the musician and the instrument will significantly be reduced.

These recommendations are based on the current knowledge and are provided for the time needed to manage the COVID-19 pandemic.

1/ PREAMBLE

Following are the situations when the instrument / accessory could be contaminated (these cases depend on whether you are a musician or work in a workshop or a music store):

- Purchase, rental
- Repair or maintenance
- Exhibition / trade show
- Bench trial in a workshop or a shop
- Loan, class, rehearsal or live performance
- Transportation
- Using / playing the instrument without prior hand washing / disinfecting
- If someone touches it or gets close to it (<2m and coughs or talks)

In any other case, disinfection is not necessary. Regular cleaning and maintenance of the instrument and its accessories remain the good practice, whether the virus is present or not.

Good practice is common sense

- Prior to any disinfection, wash / disinfect your hands and clean every part of the instrument and accessories with a disinfected dry cloth¹;
- Do not use any paper-based material such as paper towels which may scratch the lacquers and leave bits of lint on the surfaces
- If possible, quarantine the instrument and its accessories, for it will significantly help reduce the virus levels. The virus survival on the different surfaces depends on multiple parameters such as material, texture, humidity, presence of proteins and bio film. Preliminary data give a more accurate evaluation of the necessary quarantine duration according to the material. Please read Section 4 for further information about the quarantine.
- Before applying any of the products listed below on the entire instrument and its accessories, please try on a small part of it
- When multiple persons are playing or using an instrument and its accessories, encourage them to use at least a surgical face mask and wash / disinfect their hands.

(1): Do not use the cloth multiple times without either disinfecting it with an effective product, or washing it at 60°C or higher for over 30 minutes. Otherwise, throw it away in an airtight container.



2/ DISINFECTANT PRODUCTS AND PROCESSES

The following products allow for disinfection which will significantly reduce the virus levels.

You will find in the second part of this document a list of products suited for the different parts of your instrument:

- Chlorate derivatives: bleach > 0.5%. The value represents the sodium hypochlorite concentration. It's usually available with a 2.6% concentration – or a 5 times maximum dilution – which means one dose of the 2.6% product for 4 doses of cold water.
- 70% Alcohol. Alcohol is a well-known virucidal agent. Here's a list of recommended alcohols:
 - Ethanol (the most common)
 - Isopropyl alcohol
 - Their concentration must be at least 70% (drugstores).
- NF EN 14476 standard compliant products (Sanytol®, Sani-Cloth®), in which hydrogen peroxide or quaternary ammoniums (didecyldimethylammonium chloride) are the most common active agents ; please strictly follow the instructions of use (e.g. contact time). These are often alcohol-free solutions.
- Soap. Certain soaps have proven effectiveness in deactivating the virus but only after 3 minutes of use. These are:
 - KLINTE DE® soap, diluted 10 times
 - Little Marcel Green Soap®, effective when diluted up to 10 times.

However, this effectiveness is not guaranteed for all soaps and application modes. Other products should therefore be preferred whenever possible. Most notably, soap cannot be applied on an instrument with a friction that is equivalent to that of the hands, nor with the same amount of water. It's probably not as efficient when only "applied" and wiped up.

⚠ Non-Validated Products

The following products have been tested against active SARS-CoV-2 but have not demonstrated sufficient efficiency as a disinfectant.

- 3% hydrogen peroxide (or 10 volumes).



Disinfection Processes

We can see, especially on the Internet, that UV- or ozone-based processes are used for disinfecting music instruments and other products. Extreme caution is required when using these methods to potential health risks, if they have not been certified by independent, scientific and professional organizations.

⚠ • Ultraviolet treatments can be efficient in certain contexts but they must be handled with extreme caution because they may be harmful to the skin and eyes and may form ozone, which is toxic. Moreover, these processes do not guarantee full efficiency, in particular when specific parts cannot be lit. It is important to take into account the UV-C light wave length (220 to 280nm), its power, distance and exposure duration. These treatments may also damage the lacquers, especially on string quartet instruments. In any case, the provider must present evidence of the effectiveness of such approach (in particular the time required to deactivate SARS-CoV-2).

⚠ • Ozone in gas phase may deactivate viruses, but at high concentrations only, which will be harmful to human beings. Its use requires very specific knowledge and skills. It is not particularly recommended to this day..

3/ CLOTHS AND CLEANSING WIPES

- Microfiber cloths that won't scratch the lacquers can be reused after being disinfected or washed (> 30 minutes, > 60°C, with a detergent product).
- Non-impregnated polishing cloths or wipes can be reused after disinfection or wash (> 30 minutes, > 60°C, with a detergent product).
- Pre-impregnated wipes, please ensure that these are NF EN 14476 standard compliant², that they are not abrasive and follow their instructions of use. Please pay attention to the string quartet instrument lacquers and check compatibility, in particular when using alcohol products.
- Avoid any paper towels on the lacquers, but preferably use cotton cloths instead.

(2) NF EN 14476 standard means that the product inactivates 99.99% viruses (per 10,000 division) in the protocol provided by the manufacturer.

4/ QUARANTINE

Quarantine duration has not been clearly defined yet, because it depends on multiple factors (material of the surface to be decontaminated, room ventilation, humidity, temperature, and more).

Several results have emerged. Most notably, the common 3-day duration is in no way the generic rule. The instrument or accessory material must be taken into account. The list below describes the materials for which the viral load is sufficiently reduced. These results follow from trials carried out by a French Institute using SARS-CoV-2, for the purposes of the PIC Project (Protocoles pour les Instruments face au Coronavirus / Procedures against Coronavirus for Music Instruments). This is the second part of the PIC Project, the first one being the writing of these guidebooks.



GENERAL PRINCIPLES

Materials on which the virus has been sufficiently deactivated (disinfection) after 3 days

Silver
Nickel
Nickel Silver
Gold Plating
ABS Plastic
Polyurethane Varnish
Nitrocellulose Varnish

Materials on which the virus is still active in significant amounts after 3 days, (quarantine during at least 6 days as a precaution)

Ebonite
Brass
Oil-Based Varnish
Alcohol-Based Varnish
Epoxy Resin-Based Varnish

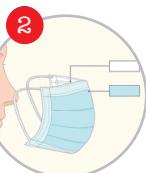
5/ FACE MASK USE

- Wearing a face mask is mandatory when being near other persons.
- Strictly follow the protocol to wear your mask:

How do I put my surgical face mask on?



Wash your hands



Flip your mask to the right side (stiff edge is the top, white side towards your face)



Tie the top ties of your face mask



Pinch the stiff edge to adjust it to the shape of your nose



Tie the bottom ties of your face mask



To remove it, only touch the ties



Throw the face mask away and wash your hands

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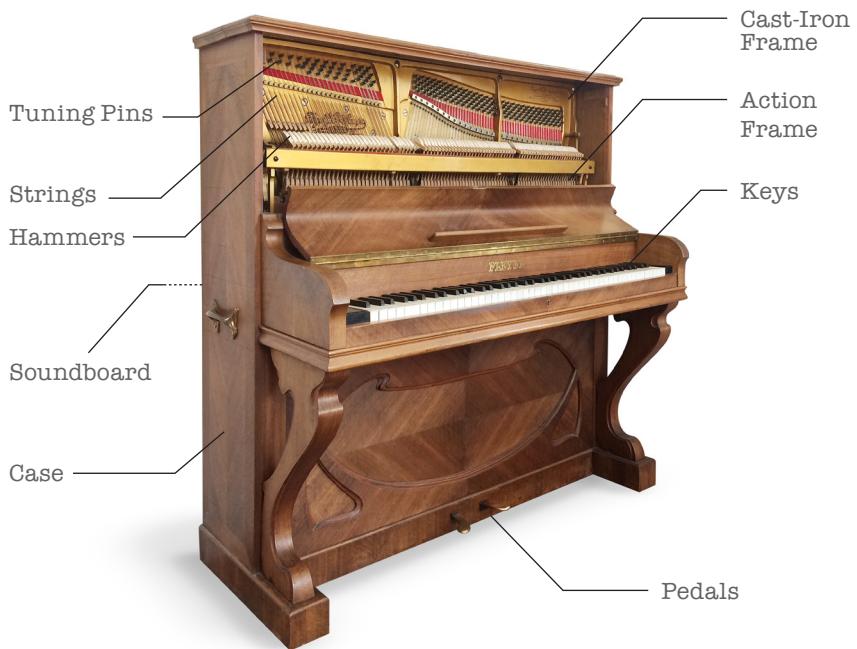


KEYBOARD INSTRUMENTS

Process

1. Wash / disinfect your hands.
2. Clean with a disinfected dry cloth.
3. For liquid products to be applied:
gently wipe with a disinfected cloth
or a cleansing cloth which was
previously slightly moistened
with the product. Do not soak the
cleansing cloth with the product.
4. Do no reuse the cloth after
disinfection (sanitize, wash at 60°C
for 30 minutes or throw it away).
5. Wait until your hands are
completely dry before
playing or touching the instruments.

DESCRIPTION OF THE PIANO



1/ MATERIALS, COMPATIBILITY

- Frame

Coated metal alloys: please read the varnish compatibility chart on page 9.

Solid or plywood: compatible with non-denatured, 70% or higher alcohol.

- Case

Non-lacquered solid woods are compatible with non-denatured, 70% or higher alcohol. Please read the varnish compatibility chart on page 9 for further details.

For harpsichords and generally any painted case, liquid products cannot be used.

- Action Frame

Being in an enclosed space, for standard use, the upright piano action frame should not be exposed a priori, except when manipulated by the piano tuner (who should wear a face mask and gloves). The action frame being made of multiple hardly accessible components (wood, metal, felt...), should the piano lid be open (during a performance or in a workshop), a long-term quarantine should be the preferred solution when contamination is suspected (please read the first section regarding quarantine).

Keeping the lid closed when playing a grand piano protects the action frame the same way as on an upright piano. When played with the lid open, felt hammers and dampers could potentially be contaminated. This section mainly refers to technicians for standard applications.

Please avoid any contact with the hands (with or without gloves) and face during operation, wear a face mask or a protective visor, then disinfect your hands.



KEYBOARD INSTRUMENTS

- Keys(coating)

Following are data about the designation, composition and origin of piano key coatings.

Designation	Composition	Origin
Vigopas P 71 A	Polyester Resin	Raschig Corporation Richmond, Virginia, U.S.A
Dekorit 203 Dekorit V384	Phenolic Resin	Raschig corp. Richmond, Virginia, U.S.A
Galalith	Casein + Polyester	Fedra Design ltd. Providence Rhode Island, U.S.A
Celluloid	Cellulose Nitrate + Camphor, May use Casein	Discontinued
Polymer Composite Materials	Ivory Powder + Styrene Resin	
Ivorite	Casein + Hardener	Yamaha corporation, Japan
Alabrite	Calcium Carbonate + adhesive binder	Discontinued
Neotex	Cellulose Fiber	Kawai corporation, Japan

Sources: Identification guide for ivory and ivory substitute : Espinoza O.E, Mann M-J, 1992 - WWF - 2nd edition. The Care of Historic Musical Instruments : Robert L. Barclay - 1997 Co-published by the Canadian Conservation Institute and the Museums & Galleries Commission. ISBN 0-660-1711 6-3.

Patents: US N° 4.960.805 - Yamaha corporation - 1990 / US N° 5.137.941 - Yamaha corporation - 1992 /
US N° 4.508.575 - Yamaha corporation - 1984 / US N° 5.265.515 - Steinway musical properties Inc. - 1992.

Products / Disinfection Processes	Ivorite	Ivoire / Bone	Ebony	Bakelite Galalith Casein	Celluloid	Polyester
Chlorate derivatives coming from bleach > 0.5 %	To be tested	To be tested	No	To be tested	No	Yes
70% or higher Alcohol	Yes	Yes, if over 95% without additive, Occasional use only	Yes	Yes	Yes	Yes
14476 standard products (Sanytol® without hydrogen peroxide, Sani-Cloth®, Cleanisept® etc.)	Yes	Yes	Yes	Yes	Yes	Yes
UV-C	blanchiment	blanchiment	To be tested	To be tested	To be tested	To be tested

Using alcohol in any form on old keyboards will affect the sparkle, but won't damage the material as much if used sparingly.



KEYBOARD INSTRUMENTS

- Keys (main part)

Solid woods are compatible with non-denatured, 70% or higher alcohol. Be careful not to damage the coating adhesives by applying too much alcohol.

- Pedals

All identified metals are compatible with 70% or higher alcohol.

- Soundboard and Bracings

Solid woods are compatible with non-denatured, 70% or higher alcohol. Piano soundboards and bracings are lacquered, caution is required with old pianos in which soundboards coatings use alcohol. In any case, please refer to the lacquered part.

- Bridges

Both solid woods and bridge pins are compatible with 70% alcohol.

2/ COATINGS

Many types of coatings can be applied, according to eras and quality ranges.

- Nitrocelluloselacquer
- Polyurethane / Polyester / Polyacrylate Lacquers
- Shellac (and any other alcohol-based lacquer)
- Oil-based lacquer
- Wax/Pore-Filler, wax

Instruments manufactured until the first half of the 20th century used multiple materials and coatings, please ask a professional.

Products / Disinfection Processes	Coatings Polyurethane/ Polyester / UV/ Polyacrylate	Coatings Cellulose / French Polishing	Tainted Wood	Oiled Wood	Waxed Wood	Unpro- cessed Wood
Chlorate derivatives coming from bleach > 0.5 %	Yes	No	No	No	No	No
70% or higher Alcohol (éthanol, isopropylque)	Yes	No	No, if Water-based Coating	To be tested	Yes	Yes
14476 standard products (Sanytol® without hydrogen peroxide, Sani-Cloth®, Cleanisept® etc.)	Yes	Yes	To be tested	To be tested	To be tested	Please Test Before
UV-C	To be tested	To be tested	To be tested	To be tested	To be tested	To be tested



KEYBOARD INSTRUMENTS

REMINDER (see the table)

• Modern Coatings

(Polyurethane / polyester / UV lacquers) biocide surface cleaners or 70% or higher alcohol seem to be the most appropriate products, even when used frequently. These lacquers are very resistant and can handle repeated disinfections.

• Cellulose Finish and French Polishing

Alcohol-free NF EN 14476 standard solution should be preferred. Caution: these finishes are fragile, these treatments must be applied with care when used repeatedly. These coatings generally require more attention, à which is why they are often used on high-end instruments. Please contact your instrument manufacturer.

• Oiled or Waxed Coatings

Whatever the treatment applied, a damaging abrasion will occur in the long term. Wiping with a dry and disinfected cloth, followed by a quarantine, should be the preferred solution. Please contact your instrument manufacturer.

3/ STRINGS

Being in an enclosed space, strings should not be exposed in pianos a priori, except when manipulated by the piano tuner (who should wear a face mask and gloves). When the piano lid is open (during a performance or in the workshop), should any contamination be suspected, the best known solution to this day is a 6 to 9 day quarantine.

Please avoid any contact with the hands (with or without gloves) and face during operation, wear a face mask or a protective visor, then disinfect your hands.

Plain wire strings can be cleaned using 95% alcohol. None of the listed products are recommended by professionals to clean copper-wound piano strings. However, they can be cleaned with a disinfected dry lint-free cloth. Do not reuse the cloth after disinfecting the instrument (sanitize, wash at 60°C for 30 minutes or throw it away).



ACCESSORIES

BENCH

For bench handles, use a non-abrasive disinfecting tissue or gently wipe with a folded paper towel which was previously slightly moistened with rubbing alcohol. Beware of the fabrics. Clean the bench handles with 70% alcohol. Do not use alcohol to clean old benches.

METRONOME

The metronome can be cleaned like metal and wooden parts (lacquered or not). Please read the previous sections of this guide.

SCORES

Except a 6 to 9 day quarantine, there is currently no known solution to disinfect music scores. We recommend covering the pages with plastic sleeves as these can be cleaned with alcohol.

MUSIC STANDS

Music stands are usually made of metal. Therefore, they can be cleaned with 70% alcohol. Built-in music racks must be cleaned like any other wooden part. If the music rack features a felt pad, it must be protected (plastic foil, Plexiglas, wood...).





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