UHL INSTRUMENTS X3

Owner's Manual
X3-1 / X3-2

IMPORTANT SAFETY INSTRUCTION

Please read the entire manual and the safety instructions. It contains all the information you need to use this unit. Don't skip any passages to ensure perfect operating of the instrument.

The product must be serviced by qualified service personnel only. **DANGER! Risk of electric shock.** Do not open the chassis. There are no user serviceable parts inside. The unit should only be serviced by qualified service staff.

Unauthorized opening of the chassis or malpractice of the unit will void warranty. The device may be used only to its intended usage. Please operate the instrument only according to these instructions.

Mains
Before connecting the unit to the mains power supply, please check voltage. The unit can be powered with 100VAC up to 240VAC. Use the correct power cord. Do not use a damaged power cord or plug.

Humidity
To reduce the risk of fire or electric shock, do not expose the unit to rain or moisture. Never place containers with liquid on the unit. Do not use the unit near water, e.g. swimming pool, bathtub or wet basement.
If the unit is moved from a cold place to a warm room, condensation may occur inside. To avoid damage please allow the unit to reach room temperature before switching on.

Installation
Always place the unit on a stable keyboard stand or table. Protect the unit from strong impact. Do not drop it!

Cleaning / Maintenance
Never use any abrasive detergent, which may damage the surface. We recommend a slightly moist micro-fibre cloth. Do not allow any liquids (water, soft drinks, etc.) to penetrate the unit.

Packaging
Please keep all packaging, and use it to protect the keyboard when transporting, e.g. if servicing is required.

Table Of Contents

Introduction

Thank you very much for choosing an Uhl-Instruments X3-1 or X3-2. You have obtained a state-of-the-art model of a vintage organ. We recommend that you read the entire manual carefully to take full advantage of all the functions of your new Uhl-Instruments X3. Please keep this manual for later reference. We also recommend you to keep all packaging to protect the instrument if transporting is required.

X3-1 and X3-1 have identical connection jacks and controls. Hence both models are referred to under the name X3 in the following.

X3 Overview

The HOAX sound engine of the Uhl-Instruments X3 organs fully matches the vintage electromagnetic organ sound, including rotary cabinet, spring reverb and pedal sustain. This sound engine features completely new principles of electronic sound generation. An exact physical model of the famous vintage organ delivers the most authentic organ voices imaginable. It doesn't use computers, signal processors, sample players or analog electronics. Instead, the layout of vintage organs has been transferred to a detailed physical model. HOAX does not emulate the sound; it rather **creates** the sound in real-time – just like real magnetic wheels.

The percussion has that gorgeous round wooden "clonk" (remember "Child in Time"?). The smacking produced by the tone generator gets under your skin, especially in connection with percussion on. We recreated even the smallest details of the finest sounding vintage organs. No computers, no samples and no DSPs are used to comprehensively mimic all the characteristic sound details. To take a single example: the Chorus/Vibrato can't be distinguished. No wobbling! Switch it on and enjoy that silky C/V shimmer, long-desired by clonewheel players.

The innovative sound generation boast a great number of advantages: there is absolutely no perceivable key-to-audio latency since the 91 magnetic wheels are continuously running, just like in a magnetic wheel generator. Polyphony is unlimited. No lost notes, even if all keys are pressed simultaneously. And the total absence of unwanted phase relations between the magnetic wheels makes the sound of the Uhl-Instruments X3 so incredibly lively and natural.

All the sought after „shortcomings"were taken over as well:
Leakage /crosstalk, magnetic wheel slip and flutter, harmonic distortion and output voltages of pickups and filters - and of course the typical „keyclick". The X3 keyclick is not just an added noise signal. It is dynamically produced by random "chatter"of key contacts, dependent on key velocity. Other features are: Chorus/Vibrato based on a digitally recreated LC delay line, Percussion in all variations, foldback and precise tapering. Drawbar response is immediate and responsive, just like a vintage organ.

Warning! Playing an Uhl X3 organ is highly addictive!

Backpanel Connections

Expression-Pedal
Page 11
e.g. Yamaha FC-7

2 x MIDI IN
Page 18

Rotary SLOW/FAST
Start /Stop
Foot-Switch
z.B. BOSS FS-5L

MAIN-OUT
L + R
Page 10

AUX-OUT
L + R
Page 10

Expression-Pedal: The pedal jack can be used with a Yamaha FC7 or similar expression pedals

Rotary SLOW/FAST: Supports latch mode footswitches with stereo plugs. Momentary switches are not supported. Pin configuration: Tip = SLOW/FAST, Ring = RUN/STOP

2 x MIDI IN: These inputs can be used to connect a controller keyboard for Lower Manual (Midi channel 2) and a Midi pedal for pedal bass (Midi channel 3).
l
Main-OUT L + R: Standard audio output for standard instrument cables (TS Male ¼). The audio routing can be configured with the display/menu-panel (see page 20).

AUX L + R: Auxiliary audio output for for standard instrument cables (TS Male ¼). The audio routing can be configured with the display/menu-panel (see page 20).

USB
Page 26

Phones
Page 10

11-Pin
Jack
Page11
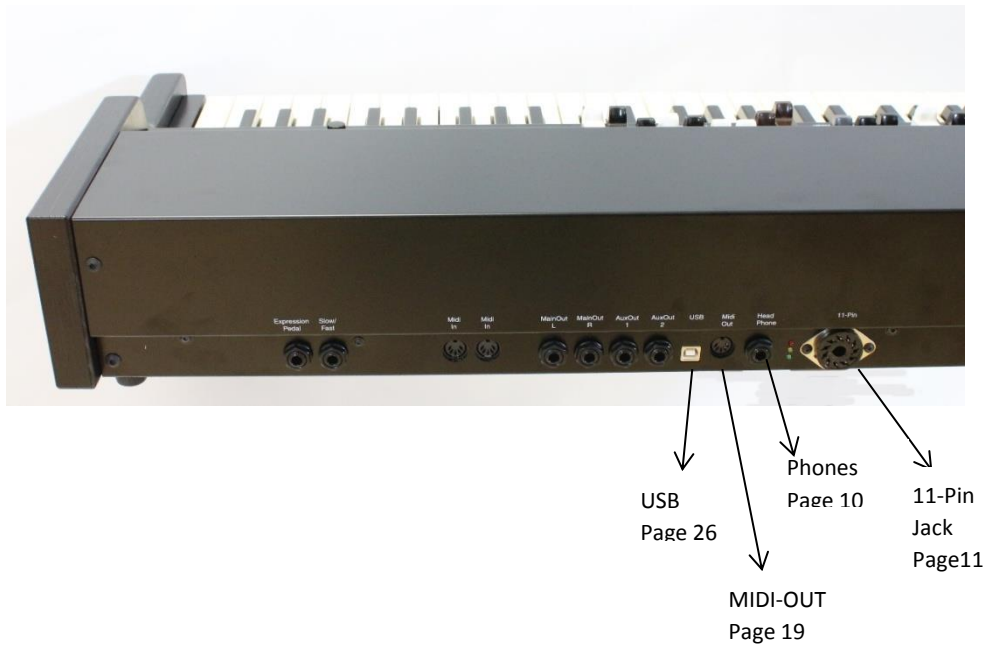
MIDI-OUT
Page 19

USB: This is only for connecting to a PC for using the X3-Remote software (no USB-Midi). Please see page 26 for a X3 Remote software instruction.

MIDI-OUT: The X3 can be used as a velocity sensitive controller keyboard. External sound modules or synthesizers can be played together with the organ sound of the X3.

PHONES Jack: This is a stereo jack for connecting headphones.

11-Pin Rotary Jack: For connection of an external rotary cabinet (see page 11)

Power Switch

AC IN 100-240 V

2 Fuses
a 500 mA
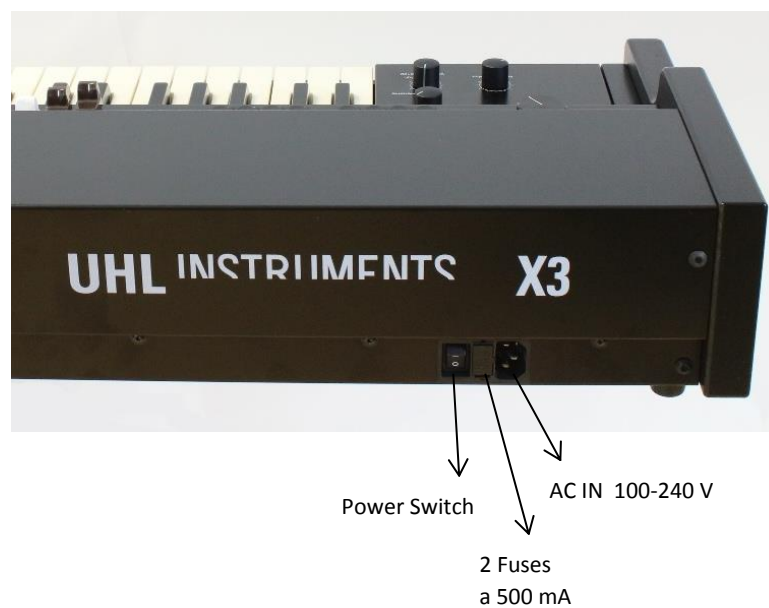
Power Switch (see page 8)

Connecting the Power Cable

The X3 runs on AC power: 100, 120, 230, or 240 volts at 50–60 Hz. The voltage level is set automatically. Make sure the X3 power switch is set to off before you connect the power cable. Plug the cable into a grounded outlet only.
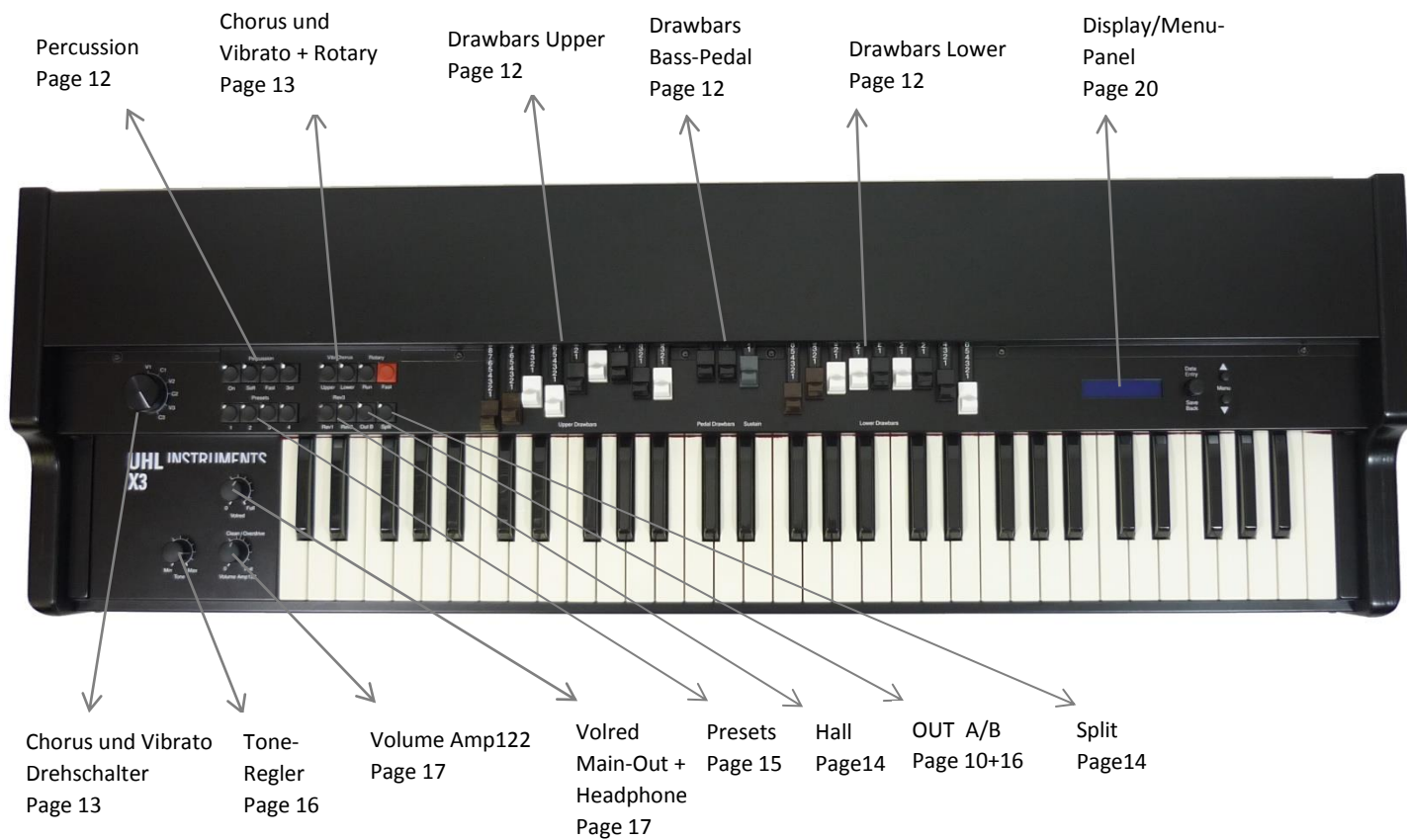
Make sure that your power outlet delivers an appropriate voltage level as described above.

The power cable may vary according to the country where you bought your X3. Do not manipulate the cable or plug. If your power source does not have a standard grounded outlet, you should have a proper grounding system installed by an expert before using the X3. This will reduce the risk of a shock.

Console

Percussion
Page 12

Chorus und
Vibrato + Rotary
Page 13

Drawbars Upper
Page 12

Drawbars
Bass-Pedal
Page 12

Drawbars Lower
Page 12

Display/Menu-
Panel
Page 20

Chorus und Vibrato
Drehschalter
Page 13

Tone-
Regler
Page 16

Volume Amp122
Page 17

Volred
Main-Out +
Headphone
Page 17

Presets
Page 15

Hall
Page14

OUT A/B
Page 10+16

Split
Page14

Startup

Connecting the Power Cable:

Make sure the power switch (see page 7) 10is set to OFF before you connect the power cable at the X3.
Plug the power cable into a grounded outlet only.

ⓘ The X3 runs on AC power: 100, 120, 230, or 240 volts at 50–60 Hz.

Audio Connections

Make sure your sound system is at a safe volume level. Also make sure that the X3's
VOLUME knob (on the far left side of the front panel) is all the way down.

Plug in a pair of stereo headphones or run two standard 1/4-inch instrument cables from the
MAIN outputs of the X3 to your amplifier or mixer for stereo. Use only one of the two outputs for mono.

AUDIO-Jacks:

The X3 features two pairs of audio jacks, MAIN-Out und AUX-Out (see page 6) and the 11PIN-Jack (see page
7 +11). Thes are standard ¼ inch jacks. The audio routing can be configured with the display/menu-panel
(see page 20). The position of the symbol in the display also indicates at which output jacks, for example L
/ R was routed:

The left side of
Display shows
Allways:
MainOut 1+2

The right side of display shows allways:
 AuxOut 1+11PIN / AuxOut 2
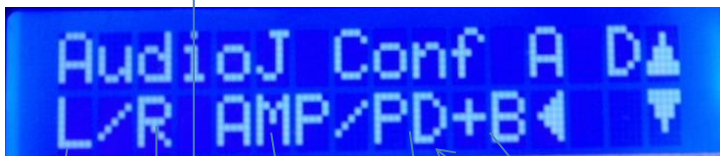
MainOut L   **MainOut R**   **AuxOut 1**   **AuxOut 2**   **+B = alle Ausgänge mit Pedalbass**
                                 + 11Pin

L/R = is always with internal Rotary Stereo-Simulation (left and right),
         and always with Amp 122-Simulation (Overdrive)

ORG = pure organ signal as G-G OUT of B3 **without** Amp122 – Simulation (Overdrive)
AMP = pure organ signal **without** internal Rotary-Simulation, **with** Amp 122-Simaltion (Overdrive)
PD = Bass-Pedal
+B = with Bass Pedal on **all** outputs
         The bass pedal can also be output quite separately (**PD – for example here on AuxOut2**)
         If the "+ B" does not appear, the pedalboard is routed separately and is not present in L / R, AMP and
         ORG and just comes on „PD"

MAIN-Out und AUX-Out jacks can be used with professional audio equipment like active speakers, mixers,
PA, multicore /DI-Boxes, rotary cabinets (1/4 –inch plugs) and other such audio devices.

11-Pin Rotary Output:

The X3 is designed to connect with a 11-pin rotary speaker cabinet. When a physical rotary speaker is connected via the 11-pin plug, the [RUN] and [SLOW/FAST] control buttons perform the same functions as with the internal rotary simulation. The rotary speed can also be controlled with a foot switch like e.g. a BOSS FS5L (latch mode switch with stereo TS ¼ inch plug only! See page 6).

Volume/Expression-Pedal Input
Connect an expression Pedal like the Yamaha FC7 or similar (10k to 47k) here to control organ volume while you are playing (see page 6).

Foot Switch Input
Connect a 1/4" TS foot switch here to control the SLOW/FAST settings of the internal rotary simulation. The footswitch also can control a physical rotary speaker connected to the 11-pin jack. Attention! Please only use a latch mode switch like the BOSS FS5L. Momentary switches are not supported! To also control the RUN/STOP function in addition to SLOW/FAST a double foot switch is needed.

Controls

Drawbars

9 Drawbars Upper-Manual	2 Drawbars Bass-Pedal	Sustain	9 Drawbars Lower-Manual
16" 5 1/3" 8" 4" 2 2/3" 2" 1 3/5" 1 1/3" 1"	16" 8"	Bass-Pedal	16" 5 1/3" 8" 4" 2 2/3" 2" 1 3/5" 1 1/3" 1"

The X3 organ has 2 sets of nine drawbars, one for the upper manual and one for the lower manual plus 2 drawbars for the bass pedal. A third bass pedal drawbar controls sustain of the bass sound. The drawbars are used for adjusting the basic harmonics of the X3. This offers a wealth of sound shaping options. All 9 drawbars pulled out results in 9 different harmonic tones per key.

Percussion
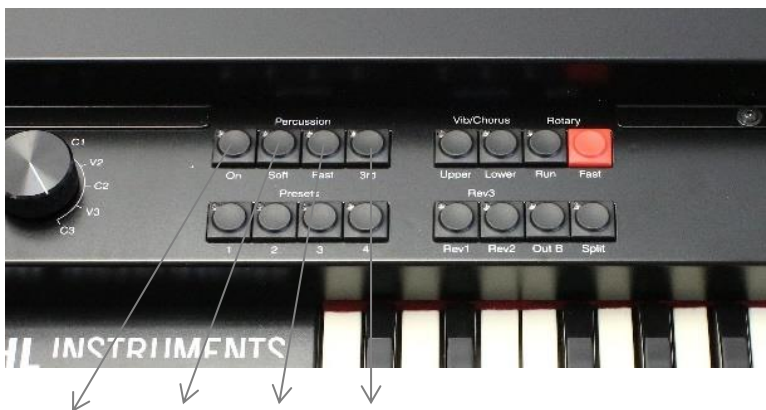
Percussion: ON/OFF   SOFT   FAST   3 RD

Percussion changes the attack characteristic of a note by adding an percussion signal to the note that is played. The volume of the percussion is adjusted by the SOFT button. Decay of the percussion signal depends on the FAST button setting. Frequency is selectable to be either the 2nd or 3rd harmonic of the played note. Percussion is "single triggered". To hear the percussion effect for every note requires that the currently pressed key is fully released prior to playing the next one. The percussion can only be enabled on the upper manual. All percussion parameters like volume, decay are programmable in the Menu/Display panel (see page 20).

Chorus/Vibrato

Sixfold rotary switch
Chorus/Vibrato
3xVIB/3xChorus

Chorus/VIB
Upper
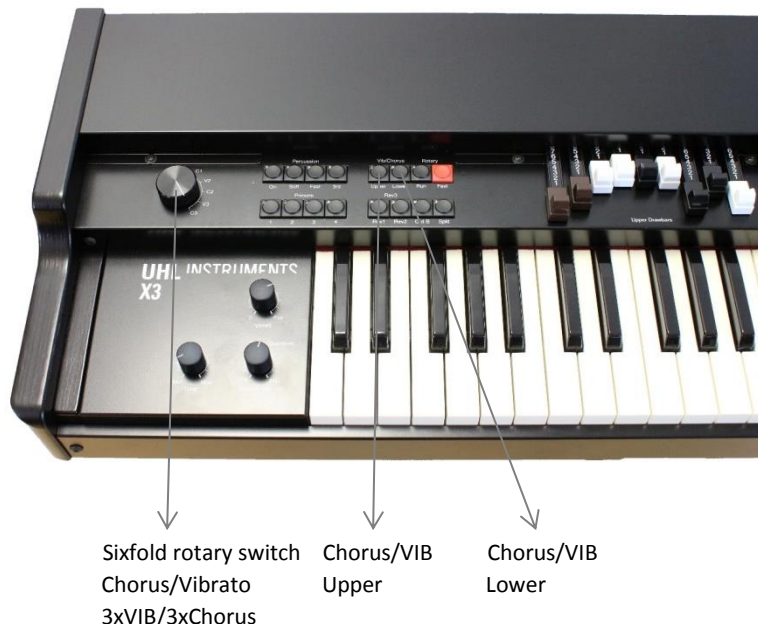
Chorus/VIB
Lower

Rotary switch is used for selecting one of the six effects vibrato V1, V2, V3 or chorus C1, C2, C3. The two push-buttons Vib/Chorus Upper and Lower are used to switch the effect on/off, either for the upper or lower manual. Ex-factory the Vib/Chorus parameters are set according to a real vintage organ. All Vib/Chorus parameters are programmable in the Menu/Display panel (see page 20).

Internal Rotary-Cabinet Simulation

Rotary START/STOPP (Break)

Rotary SLOW/FAST

The X3 features a fully programmable rotary effect of the highest quality. It faithfully replicates the sound of a rotary speaker cabinet including tube saturation (Tube Drive).
To activate the included rotary speaker cabinet simulation the MAIN-OUT audio jacks must be routed to [L+R]. Please check the Menu/Display panel instruction on page 20.
Use the START/STOP button to switch on the internal rotary effect. Use the red SLOW/FAST button to switch between slow and fast rotary speed (Chorale and Tremolo). The LED in the START/STOP button indicates the rotary speed.
The rotary effect is fully programmable with the Menu/Display panel (see page 20). Many parameters like speed, acceleration, horn/bass balance and distance of microphone placement can be adjusted to taste.

Hall / Reverb

REV1   REV2   REV3 (REV1 + REV2)   SPLIT

The X3 features a well-balanced reverb which emulates a vintage spring reverb.
There are four reverb levels available: OFF, REV 1, REV 2 and REV 3.
To activate the reverb press one of the buttons [REV1] or [REV2]. To obtain reverb level REV3 both buttons
[REV1+ REV2] must be pressed simultaneously. The individual levels of REV1, REV2, and REV3 can be adjusted
to taste in the Menu/Display panel (see page 20).

Split-Mode

Keyboard split is available for the lower or upper manual with a selectable split point. Two keyboard zones are
easily set up by assigning any desired key split zones.

- **Lower to Upper:** Press the key of the desired split point <u>on the upper manual</u>, hold while pressing the
  [Split] button. Now the left part of the keyboard plays the Lower Manual. Use the right-hand drawbars
  to adjust the Lower Manual sound.
- **Pedal to Upper:** Press two adjacent keys at the desired split point <u>on the upper manual</u>, hold both keys
  while pressing the [Split] button. Now the left part of the keyboard plays the Pedal Bass. Use the Pedal
  Bass drawbars to adjust the Pedal Bass sound.
- **Pedal to Lower (X3-2 only!):** Press two adjacent keys at the desired split point <u>on the lower manual</u>,
  hold both keys while pressing the [Split] button. Now the left part of the lower keyboard plays the Pedal
  Bass. Use the Pedal Bass drawbars to adjust the Pedal Bass sound.

 The split point will be saved automatically until the X3 is switched off.

Common-Presets

The X3 provides 14 common presets. All settings of a sound are stored in these presets, such as percussion, chorus/vibrato, reverb, split and audio-out routing. If none of the four LEDs is lit, the "live" setting is selected which means that drawbars and buttons are used to adjust the sound. When pressing a preset button the stored preset sound is recalled. Pressing the button again switches the X3 back to "live" setting.

14 „Common" Presets (Buttons 1–4)

Storing a preset: After you adjusted a sound to your liking press a preset button of your choice and keep it pressed until the LEDs of all preset buttons start blinking. Then release the button. Your preset is now stored and can be recalled with the respective button.
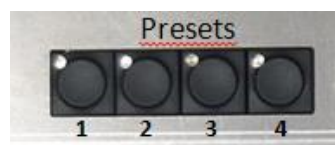
Common-Presets:
The number of common presets is derived from different combinations of the 4 preset buttons.
Up to 3 button can be pressed simultaneously to store and recall a preset:

Example 1: The preset named 1 is button 1.
Example 2: The preset named 32 is a combination of the buttons 3 + 2.
Example 3: The preset named 23 is a combination of the buttons 2 + 3.

In total there are 14 presets available.

What is stored in a common preset?
- Drawbar settings (upper, lower, pedal)
- Settings of percussion, reverb, chorus/vibrato, split, rotary, audio routing

Audio Output Configuration A/B

A/B Button

HX3 generates selectable output signals: stereo rotary simulation = L/R, plain organ = ORG, bass pedal = PD and organ with tube amp simulation = AMP.

The X3 output signals can be routed to any of the 4 jack s of the two output pairs MAIN OUT and AUX OUT. Two configurations are available, so you may set these for your own needs and toggle between them with the OUT B button on the panel board.
• **AudioJ Conf A** sets audio jack configuration A
• **AudioJ Conf B** sets audio jack configuration B
The audio output routing is fully programmable with the Menu/Display panel (see page 20).

Tone-Control

Tone-Regler

Cranked up high frequencies accentuate the key click and percussion. Turn the knob counter-clockwise to reduce high frequencies.

It is recommended to discreetly dial back the high frequencies if the X3 is played with very high volume levels during live performance.

Volume Amp122

Volume Amp122   Volred
Main-Out +
Headphone
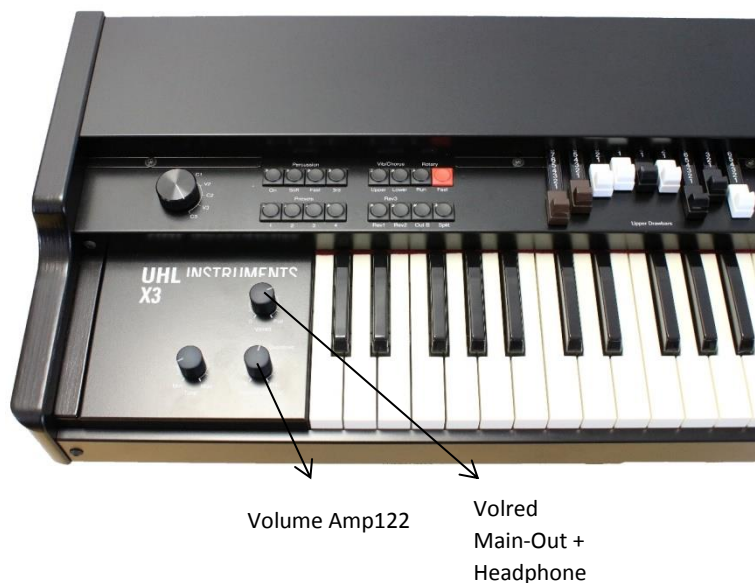
In addition to the accurate rotary simulation the X3 also features a separate 122 amp output. It emulates the sound and characteristics of the 12BH7 tube and the two 6550 tubes .The tube amp overdrive starts from the center position of the volume control. Turning the volume control clockwise adds more harmonic tube overdrive.

Volred (Main-Out + Headphone)

The intensity of the overdrive increases loudness with increasing volume level. Full overdrive can increase the total volume level too excessively. To accommodate that many clonewheels just add an unvariable monotonic overdrive. This entails limited overdrive dynamics and unnatural sound. Not so with the X3! The X3 features an additional post-overdrive Volred (= volume reduction) control. The Volred control allows for fully dynamic tube overdrive at reasonable total volume levels.

Settings:
- Volred fully turned clockwise = no volume reduction.
- Volred turned counter clockwise = reduced volume level including overdrive at MAIN-OUT jack/headphone jack (Volume Amp122 control must be turned clockwise!).

MIDI

2 x MIDI-IN   MIDI-OUT

MIDI-IN (2x)

The two Midi inputs can be used to connect a controller keyboard for Lower Manual (Midi channel 2) and a Midi pedal for pedal bass (Midi channel 3) to obtain a fully fitted magnetic wheel vintage organ.
l

Example X3-1:
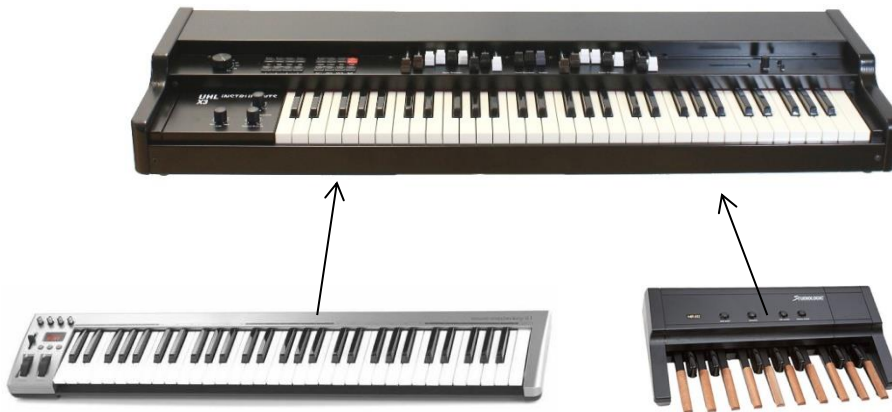
To play the „Lower" of the X3-1:
Connect a MIDI-Keyboard to one of the both MIDI-IN-Sockets of the X3-1. To play the Lower select MIDI Channel 2

To play the Pedal-Bass of the X3-1:
Connect a MIDI-Keyboard to one of the both MIDI-IN-Sockets of the X3-1. To play the Lower select MIDI Channel 3

Example X3-2:

To play the Pedal-Bass of the X3-2:
Connect a MIDI-Keyboard to one of the both MIDI-IN-Sockets of the X3-1. To play the Lower select MIDI Channel 3

MIDI-OUT

MIDI-OUT

The Midi-Out can be used to connect a sound module or synthesizer which then can be played together with the organ sound of the X3. This way the X3 can be used as a velocity sensitive controller keyboard.

Menu/Display

Display   Data/Entry Button
(Rotary-Switch + Button)
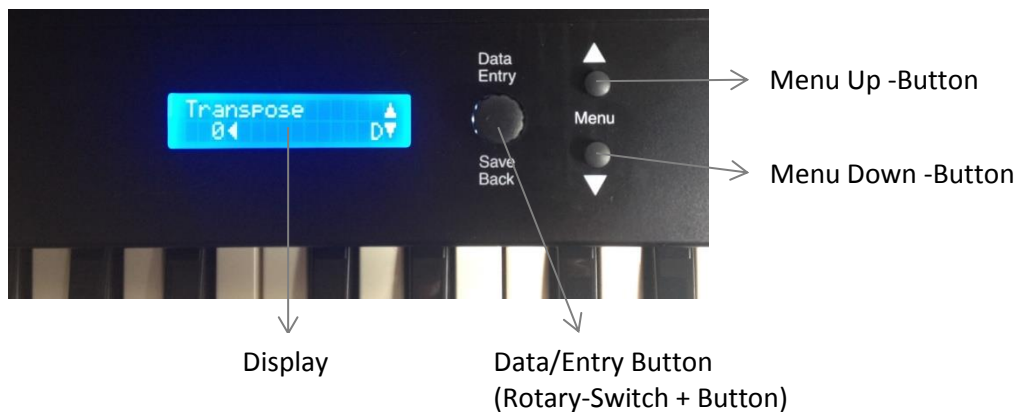
Menu Panel Display Controls

The menu panel display offers full access to many X3 parameters like percussion, chorus/vibrato, keyclick, rotary-cabinet, reverb, factory presets, leakage, tapering. All parameters can be stored individually.

Use **Up/Down buttons** to scroll through menu items.

Use the **Data Entry** incremental encoder knob to change parameter values by turning the knob either right or left. A changed parameter is indicated by an asterisk in the display. To **store** changed settings **press** the **Data Entry** rotary knob for 2 seconds until the [Saved] message appears. Hereafter the asterisk disappears.

.

If you change more than one parameter, every single parameter change must be stored individually. To find parameters which have not been stored, just use the Up/Down buttons to scroll through the complete menu and look out for asterisks. Then press the Data Entry knob for 2 seconds to permanently store each parameter still showing an asterisk.

Save Mode

Press the Data Entry knob for 2 seconds to permanently store parameter changes. The asterisk disappears after saving.
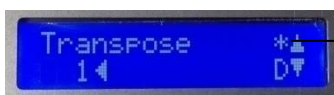
The organ was transposed by a semitone – die Change is active but not stored for future: Asterisk appears
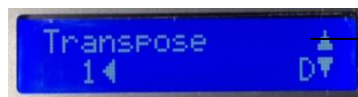
The change has been saved for the future: the asterisk is no longer displayed.

Factory-Presets

Live-Preset (= Preset 0, current drawbar status after switch-on)
The following message appears on the display:

Live-Preset Nr. 0 Upper Manual

Live-Preset Nr. 0 Lower Manual

Menu-Cursor
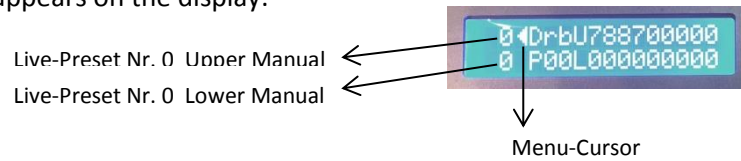
Initially after switch-on the Live-Preset will be indicated (= Preset 0). The upper line indicates the drawbar settings of the upper manual (U), the lower line indicates pedal drawbars (P) and lower manual (L) settings.

Factory-Presets

The X3 provides 14 presets each for the upper and lower manual. Use the Up/Down buttons to move the cursor to the upper or lower manual. Then turn the Data Entry knob to select one of the 14 presets for each manual.

In the following picture the cursor is located at lower manual for which preset 6 is selected. Fort he upper manual preset 4 is selected.

Factory-Preset Nr. 4 Upper

Factory-Preset Nr. 6 Lower Manual

Menu-Cursor
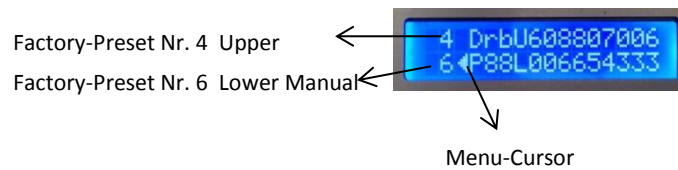
Change Factory-Presets

All 14 factory presets can be replaced by your own favorite presets.

In the following example we change factory preset no. 6 for the lower manual.

2. Select with
Data/Entry Knopf
Factory-Preset No. 6 ←

    4 DrbU608807006
    6◄P88L006654333

1. Set with up/down
button cursor on Lower
Manual
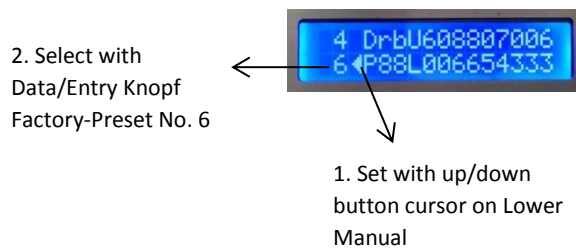
Press the Down button as many times until the display indicates the 9 drawbars of the lower manual. Adjust the drawbars either with the Data Entry knob or with the physical drawbars. Then press the Data Entry knob for two seconds to store the preset. Now you created your own lower manual preset no. 6.

Change value with Data
/ Entry button or with
real drawbars 16 "of the
lower Manuals ←

    LowerDB 16   *◄▲
    ▮▮▮▮☐☐☐◀   L▼

→ Store Value with Data / Entry
button (pressed 2sec hold)
Asterisk then disappears

The factory presets of the upper manual are changed equally: move the cursor to the upper manual → select the preset number with the Data Entry knob → then press the Up button as many times as required to get to the drawbar settings → change drawbar values as described above → press the Data Entry knob to store your settings.

Split Mode   note: see also Split-Functions page 14

5 Options:

PedalToLower   on the lower (X3-2) press a key at the desired split-point - hold the key and simultaneously press button "Split"
(Split-LED lights) **Note : Great Sound für Lefthand-Bass !!**

LowerToUpper   on the upper press a key at the desired split-point - - hold the key and simultaneously press button "Split"
(Split-LED lights) The only makes sense at X3-1.

PedalToUpper   on the upper press two key's side by side at the desired split-point - - hold the key's and simultaneously press button "Split"
(Split-LED lights) The only makes sense at X3-1. **Note : Great Sound für Lefthand-Bass !!**

Lower+1 ToU
Lower+2 ToU
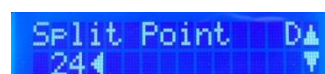
    Split Mode   D_
    Lower+2 ToU ◀ *▼

Lower+1 ToU = LowerToUpper but **1 octave higher**
Lower+2 ToU = LowerToUpper but **2 octaves higher**
(The only makes sense at X3-1, if you would play full cords instead of Lefthand-Bass)
Attention: Here first specify the split point on the display:
          Then, for example select Lower + 2 ToU the display.
          Then activate the split with the "Split" button
          (Split-LED lights)

    Split Point   D▲
    24◀   ▼

Transpose

Transpose function offers either **6 semitones down or 7 semitones up**.

```
Transpose    *▲
1◄           D▼
```

🛈 Annotation: only 5 octaves are possible. Transpose cannot generate tones outside these 5 octaves.

AudioJ Conf A und AudioJ Conf B

Switches between two output configurations which can be set individually.

• **AudioJ Conf A** sets audio jack configuration A

• **AudioJ Conf B** sets audio jack configuration B.

Use the [OUT B] button to switch between the two configurations A/B (see page 16).

```
AudioJ Conf A  ▲          AudioJ Conf B  ▲
PD/ORG R/L ◄ D▼           L/R ORG/PD+B◄ D▼
```

Vibrato/Chorus Group

The chorus/vibrato menu can be used to adjust the C/V effects individually.

```
Vib1 LC Age  *▲
44◄          D▼
```
Amplitude-modulation and Reflections of Vibrato-Delay-Line V1/C1

```
Vib1 FreqMod *▲
74◄          D▼
```
Frequency Modulation of V1/C1

```
Vib2 LC Age   ▲
60◄          D▼
```

```
Vib2 FreqMod  ▲
110◄         D▼
```

```
Vib3 LC Age   ▲
80◄          D▼
```

```
Vib3 FreqMod  ▲
180◄         D▼
```
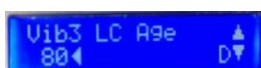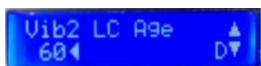
```
ChorDryMix    ▲
180◄         D▼
```
„Dry" - unmodulated share of Vibrato/Chorus-Mix - C1 C2 und C3

```
ChorVibMix    ▲
120◄         D▼
```
„Wet" -FM/AM modulated share of Vibrato/Chorus-Mix - C1 C2 und C3

```
VibScannerFrq D▲
50◄           ▼
```
Scanner-Frequenz (Speed) V3/C3 can be changed

```
VibCHighBoost D▲
60◄           ▼
```
In e.g. C3 has the original a lot more highs shares. This can reduce or lift here.

Percussion Group

The percussion menu can be used to individually adjust the settings.

PercNormLvl 180	Percussion-Level **NORMAL**
PercSoftLvl 125	Percussion-Level **SOFT**
PercLongTm 14	Percussion-Decay-Rate **LONG**
PercShortTm 30	Percussion-Decay-Rate **SHORT**
PercMutedDB 120	Reducing volume of the drawbars at Perc-Normal (For value 250 the volume of the drawbars is not reduced).
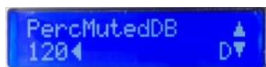
Generator Group

The generator menu can be used to adjust typical generator settings

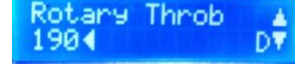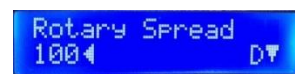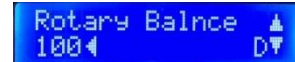|	
Master Volume D 250	Adjusting the master volume (affects all outputs !!!) - Same effect as Volred Knob (The Volred knob but only governs MainOut jacks)
TG Flutter 6	Slip and mechanical balance of tone Wheels
TG Leakage NewOrgan	Leakage (4 Presets) Clean, New Organ, Old Organ, Sleazy Organ
TG Cap Set Year 1972	Cap-Set - Generator (4 Presets) Year 1955, Year 1961, Year 1972, Recapped
No DB1 @Perc OFF	Disabled drawbars 1 "when Percussion is enabled (ON Pos.) In pos. OFF works drawbars 1 "despite active percussion
DB16 1st Oct Foldback	Harmonic foldback 16 "1 octave repeats (4 presets) Foldback, Full, Foldb muted, muted Full
ToneTrimPot 66	Tone is set with tone control button (page 16)
SwellTrimCap 50	Simulates the tuning capacitor in the foot swell Higher value = more volume with fine Overdrive
A028 TubeAge 16	Simulates aged tube (higher triode distortion)
ContSpringFlx 7	Key-Click Tone
ContSpringDmp 9	Key-Click length
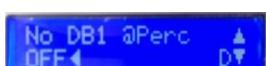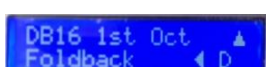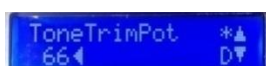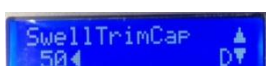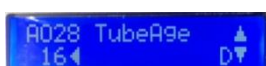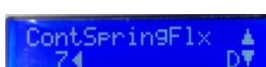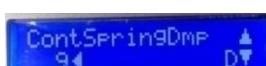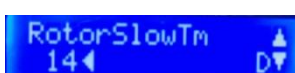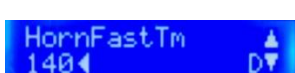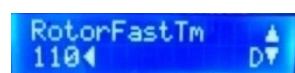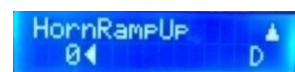
Reverb Group (Hall)

The reverb menu can be used to adjust the individual levels of REV1, REV2, REV3.

Reverb 1 Lvl 90 — Length Hall 1

Reverb 2 Lvl 150 — Length Hall 2

Reverb 3 Lvl 140 — Length Hall 3

Rotary Simulation Group

The reverb menu can be used to adjust the individual rotary settings such as acceleration, horn/bass balance, and microphone positioning.

HornSlowTm 17 — Speed Horn SLOW

RotorSlowTm 14 — Speed Rotor SLOW

HornFastTm 140 — Speed Horn FAST

RotorFastTm 110 — Speed Rotor FAST

HornRampUp 0 — Acceleration Horn SLOW / FAST

RotorRampUp 12 — Acceleration Rotor SLOW / FAST

HornRampDown 0 — Deceleration Horn FAST / SLOW

RotorRampDown 18 — Deceleration Rotor FAST / SLOW

Rotary Throb 190 — Intensity (Mikrophon-Abstand)

Rotary Spread 100 — Stereo Width

Rotary Balnce 100 — Volume Balance Horn / Rotor

Firmware-Update with Computer (PC)
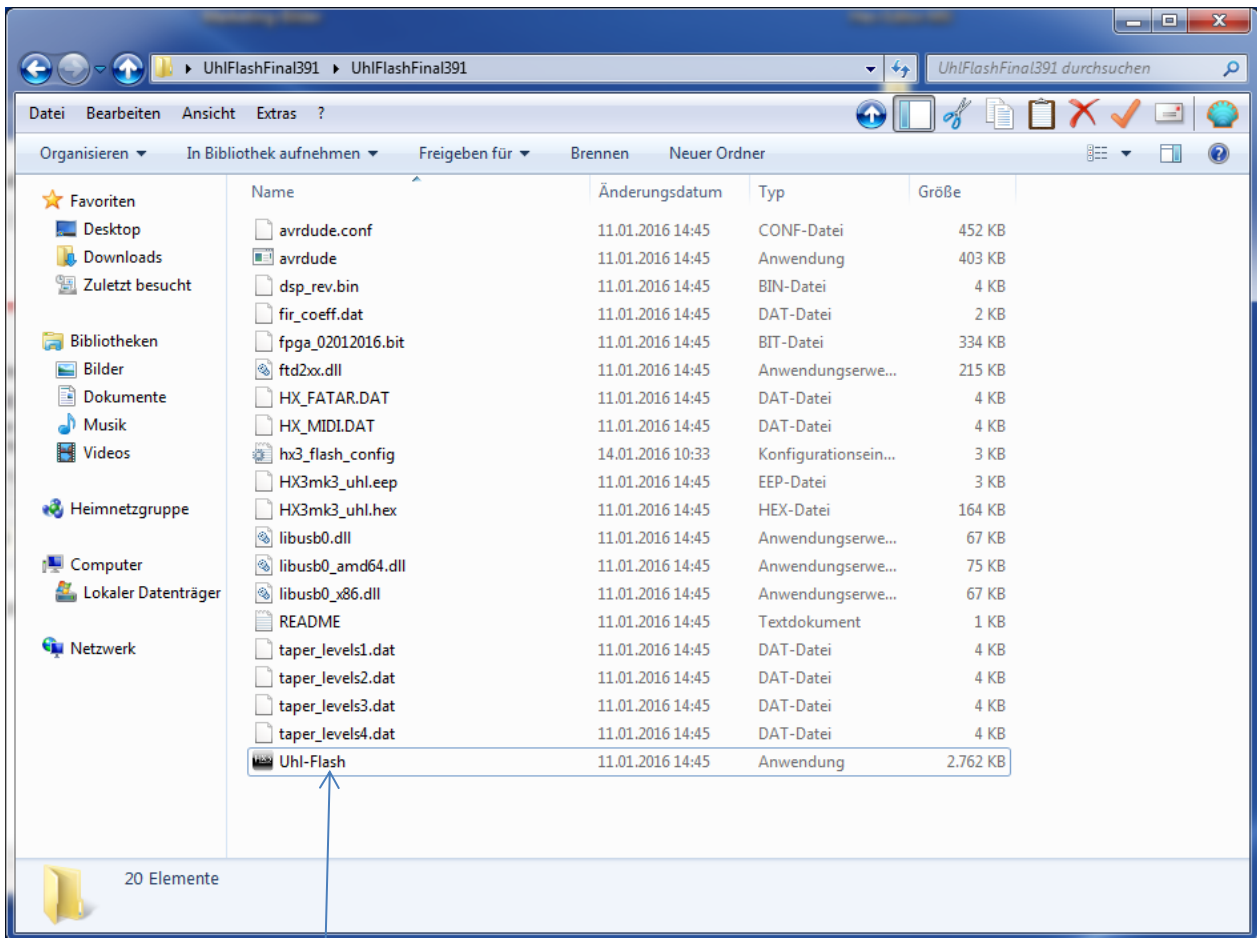
Instructions

Please perform the update exactly the following instructions:

Download firmware (link in the email).
Unzip folder ("extract all")
Extracted folder, for example: "UhlFlashFinal391" (the folder name may vary)
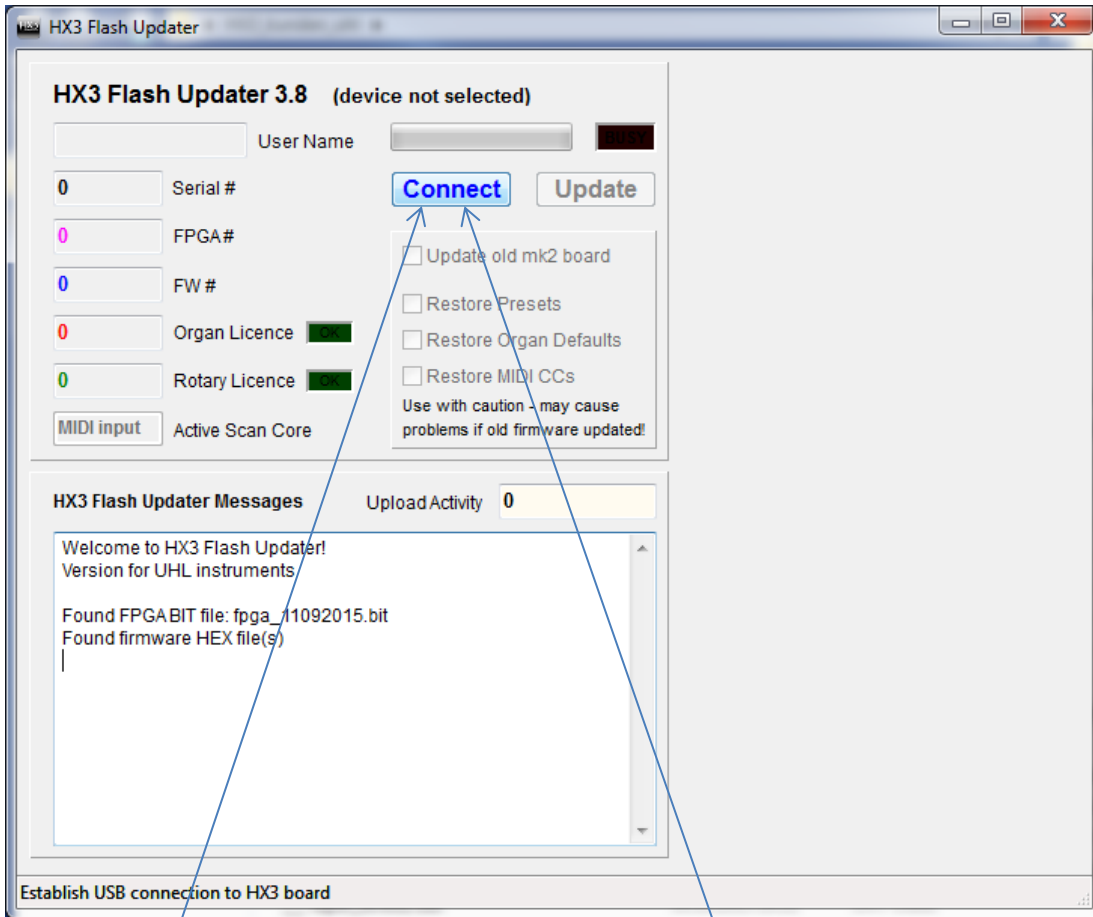opened with a double - the following window opens:

Before switching on the X3 connect it via USB cable to a running PC - now switching on the X3.
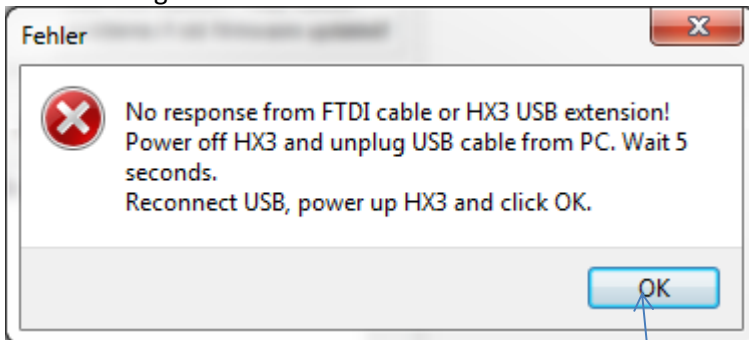The PC recognizes the new device (FTDI), and installs the necessary drivers.
(The PC should be online!!)
Now, for example: "Uhl-Flash" (the file name may vary) opened with a double:

Click on „Connect"

If this message comes:

The PC has the FTDI driver not found or installed.
Please switch off the X3, disconnect USB cable to the PC, wait about 5 seconds, connect the USB cable again and switch on the X3. Then click on "OK" and again on "Connect":
Please close the "HX3 Flash Updater" if the connection still does not work and re-open - then click again on "Connect" . Some PC's needs some tries till the connected devise is detected.

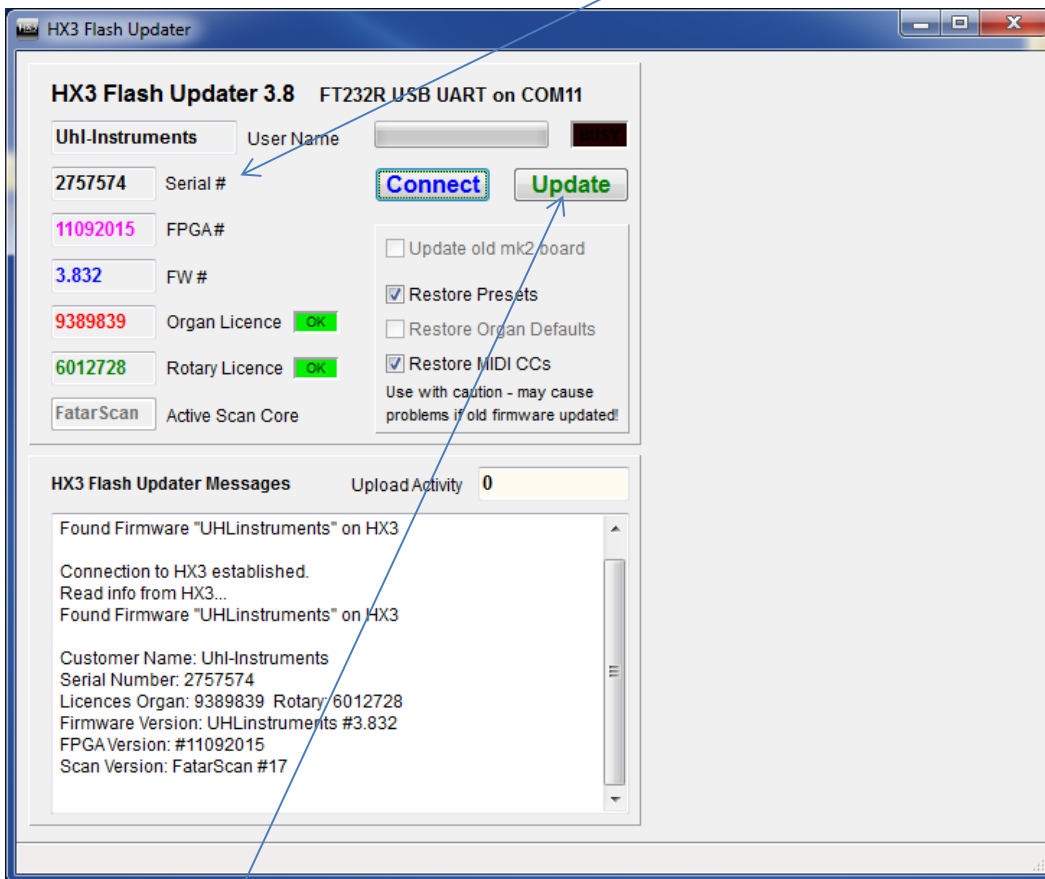If necessary, the driver must be installed manually.
(Driver for XP and driver for Windows 7 and above are a precaution in the downloaded folder).

The following window will open when "Connect" has worked:
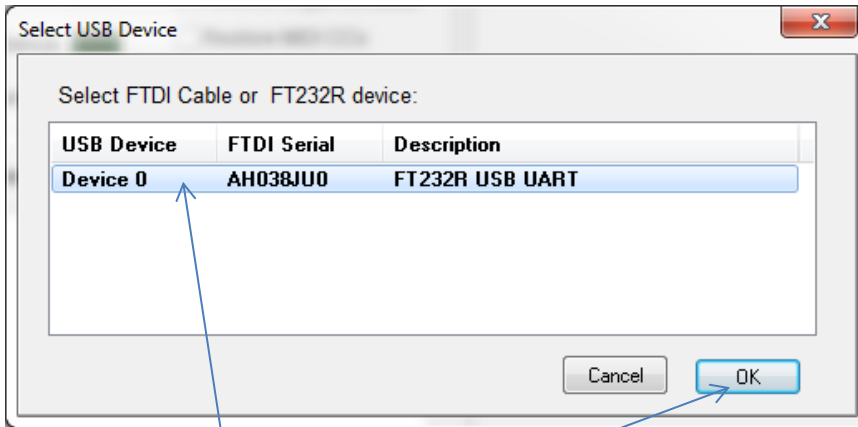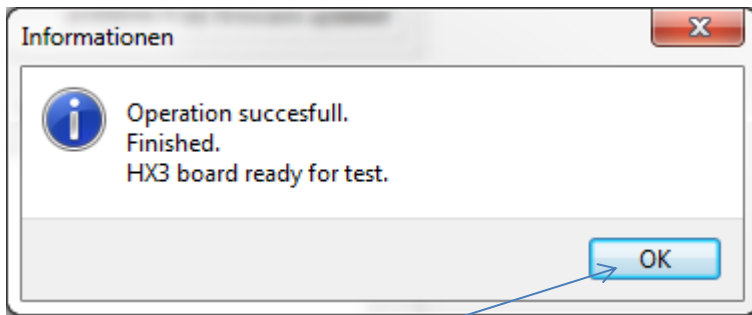
Now mark the "Device 0" and click on "OK".

The organ will now appear in the window with his serial number, etc.:

Now click on „Update"

It takes about 3-4 minutes until the update is completely installed.
Important: Your presets are read in advance, backed up and restored at the end.

At the end of this message is:

Now click on „OK"

Switch off the organ now and disconnect the USB cable to PC and organ. Switch on the organ again and play.

The serial number of the X3-X1 or X3-2 and the license numbers for Organ / Rotary, can be found on the nameplate of the instrument and on the enclosed declaration of conformity.

Reset - Factory-Reset

Because the complete function of the X3 is based on pure hardware (it does not run a computer program) is a crash highly unlikely. Only a few circumstances, it can cause a crash coming (for example Power failure during an update or Power failure during programming of presets, etc.)

So you can reset the X3:
-switch off the X3.
-press rotary knob (large button) right of the display and hold position while switch on the X3.
-now release rotary knob.

The display now shows:

Now click on △ „button up"- right of the rotary knob.
The Factory-Reset will be done now.