

XPression

Touch Factory

XPression Touch Factory
Version 1.0 Rev 2

ROSS

Thank You for Choosing Ross

You've made a great choice. We expect you will be very happy with your purchase of Ross Technology.

Our mission is to:

1. Provide a Superior Customer Experience
 - offer the best product quality and support
2. Make Cool Practical Technology
 - develop great products that customers love

Ross has become well known for the Ross Video Code of Ethics. It guides our interactions and empowers our employees. I hope you enjoy reading it below.

If anything at all with your Ross experience does not live up to your expectations be sure to reach out to us at solutions@rossvideo.com.

A handwritten signature in black ink that reads "David Ross". The "D" is large and stylized, and the "Ross" is written in a cursive-like script.

David Ross

CEO, Ross Video

dross@rossvideo.com

Ross Video Code of Ethics

Any company is the sum total of the people that make things happen. At Ross, our employees are a special group. Our employees truly care about doing a great job and delivering a high quality customer experience every day. This code of ethics hangs on the wall of all Ross Video locations to guide our behavior:

1. We will always act in our customers' best interest.
2. We will do our best to understand our customers' requirements.
3. We will not ship crap.
4. We will be great to work with.
5. We will do something extra for our customers, as an apology, when something big goes wrong and it's our fault.
6. We will keep our promises.
7. We will treat the competition with respect.
8. We will cooperate with and help other friendly companies.
9. We will go above and beyond in times of crisis. *If there's no one to authorize the required action in times of company or customer crisis - do what you know in your heart is right. (You may rent helicopters if necessary.)*

XPression Touch Factory User Guide

- Ross Part Number: 3603DR-001-01 Rev 2
- Version: 1.0 Rev 2
- Date/Time: 6/24/2025 12:03 PM

The information contained in this guide is subject to change without notice or obligation.

Copyright

©2025 Ross Video Limited, Ross®, and any related marks are trademarks or registered trademarks of Ross Video Limited. All other trademarks are the property of their respective companies. PATENTS ISSUED and PENDING. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, mechanical, photocopying, recording or otherwise, without the prior written permission of Ross Video. While every precaution has been taken in the preparation of this document, Ross Video assumes no responsibility for errors or omissions. Neither is any liability assumed for damages resulting from the use of the information contained herein.

Patents

Patent numbers US 7,034,886; US 7,508,455; US 7,602,446; US 7,802,802 B2; US 7,834,886; US 7,914,332; US 8,307,284; US 8,407,374 B2; US 8,499,019 B2; US 8,519,949 B2; US 8,743,292 B2; GB 2,419,119 B; GB 2,447,380 B; and other patents pending.

Notice

The material in this manual is furnished for informational use only. It is subject to change without notice and should not be construed as commitment by Ross Video Limited. Ross Video Limited assumes no responsibility or liability for errors or inaccuracies that may appear in this manual.

End User Software License Agreement

This End User Software License Agreement is a legal agreement between you (the "**Licensee**") and Ross Video Limited ("**Ross Video**") specifying the terms and conditions of your installation and use of the Software and all Documentation (as those terms are defined herein).

IMPORTANT:

BY DOWNLOADING, ACCESSING, INSTALLING OR USING THE SOFTWARE AND/OR DOCUMENTATION AND/OR BY AUTHORIZING ANY THIRD PARTY, INCLUDING WITHOUT LIMITATION AN INSTALLER OR COMMISSIONER ACTING ON YOUR BEHALF TO DO SO, LICENSEE AGREES TO THE TERMS OF THIS AGREEMENT AND THE LICENSE GRANTED HEREUNDER SHALL BE EFFECTIVE AS OF AND FROM SUCH DATE. IF YOU DO NOT WISH TO ACCEPT THE TERMS AND CONDITIONS OF THIS AGREEMENT, DO NOT DOWNLOAD, ACCESS, INSTALL, REFER TO OR OTHERWISE USE THE SOFTWARE AND/OR DOCUMENTATION.

1. **INTERPRETATION.** In this Agreement, (a) words signifying the singular number include the plural and vice versa, and words signifying gender include all genders; (b) every use of the words "herein", "hereof", "hereto" "hereunder" and similar words shall be construed to refer to this Agreement in its entirety and not to any particular provision hereof; (c) reference to any agreement or other document herein will be construed as referring to such agreement or other document as from time to time amended, modified or supplemented (subject to any restrictions on such amendment, modification or supplement set forth therein); (d) every use of the words "including" or "includes" is to be construed as meaning "including, without limitation" or "includes, without limitation", respectively; and (e) references to an Article or a Section are to be construed as references to an Article or Section of or to this Agreement unless otherwise specified.
2. **DEFINITIONS.** In this Agreement, in addition to the terms defined elsewhere in this Agreement, the following terms have the meanings set out below:

"**Affiliate**" means, with respect to any Person, any other Person who directly or indirectly controls, is controlled by, or is under direct or indirect common control with, such Person. A Person shall be deemed to control a Person if such Person possesses, directly or indirectly, the power to direct or cause the direction of the management and policies of such Person, whether through the ownership of voting securities, by contract or otherwise; and the term "controlled" and "controlling" shall have a similar meaning.

"**Agreement**" means this End User Software License Agreement including the recitals hereto, as the same may be amended from time to time in accordance with the provisions hereof.

"**Backup System**" means the secondary piece of Designated Equipment upon which the Software is installed and mirrored for the sole purpose of replacing a Primary System in the event such Primary System is not available or functioning properly for any reason.

"**Change of Control**" means (a) the direct or indirect sale, transfer or exchange by the shareholders of a Party of more than fifty percent (50%) of the voting securities of such Party, (b) a merger or amalgamation or reorganization or other transaction to which a Party is party after which the shareholders of such Party immediately prior to such transaction hold less than fifty percent (50%) of the voting securities of the surviving entity, (c) the sale, exchange, or transfer of all or substantially all of the assets of a Party.

"Confidential Information" means all data and information relating to the business and management of either Party, including the Software, trade secrets and other technology to which access is obtained or granted hereunder by the other Party, and any materials provided by Ross Video to Licensee; provided, however, that Confidential Information shall not include any data or information which:

- (i) is or becomes publicly available through no fault of the other Party;
- (ii) is already in the rightful possession of the other Party prior to its receipt from the other Party;
- (iii) is already known to the receiving Party at the time of its disclosure to the receiving Party by the disclosing Party and is not the subject of an obligation of confidence of any kind;
- (iv) is independently developed by the other Party;
- (v) is rightfully obtained by the other Party from a third party; or
- (vi) is disclosed with the written consent of the Party whose information it is.

"Designated Equipment" shall mean (a) the hardware products sold by Ross Video to Licensee on which the Software is installed and licensed for use, as the same may be replaced from time to time by Ross Video; or (b) in the case of Software licensed on a stand-alone basis, the equipment of Licensee on which the Software is to be installed and meets the minimum specifications set out in the Documentation.

"Documentation" shall mean manuals, instruction guides, user documentation and other related materials of any kind pertaining to the Software (whether in electronic, hard-copy or other media format) that are furnished to Licensee by or on behalf of Ross Video in relation to the Software.

"Freeware" means Software that is available free of charge from Ross Video, and includes, without limitation the master control system software known as "DashBoard".

"Governmental Authority" means (a) any federal, provincial, state, local, municipal, regional, territorial, aboriginal, or other government, governmental or public department, branch, ministry, or court, domestic or foreign, including any district, agency, commission, board, arbitration panel or authority and any subdivision of any of them exercising or entitled to exercise any administrative, executive, judicial, ministerial, prerogative, legislative, regulatory, or taxing authority or power of any nature; and (b) any quasi-governmental or private body exercising any regulatory, expropriation or taxing authority under or for the account of any of them, and any subdivision of any of them.

"Improvements" means all inventions, works, discoveries, improvements and innovations of or in connection with the Software, including error corrections, bug fixes, patches and other updates in Object Code form to the extent made available to Licensee in accordance with Ross Video's release schedule.

"License Fee" means the fee(s), if any, payable in respect of the Software in accordance with the relevant invoice(s) or other purchase documents delivered in connection with this Agreement.

"License Period" means the period of time that Licensee will have the rights granted under this Agreement, as may be specified in an Order.

"Modifications" means any enhancements, changes, corrections, translations, adaptations, revisions, developments, upgrades or updates thereto; and "Modify" shall mean the creation of any of the foregoing.

"Object Code" means the machine readable executable form of a computer software program.

"Open Source Components" means third party Open Source software, libraries or other components.

"Open Source License" means the license that governs each Open Source Component.

"Order" means the documents provided by Ross Video to Licensee detailing the Ross Video products contemplated for purchase, the corresponding fees and License Period that may apply to the Software, including any and all quotations, purchase orders, acknowledgments, pro formas, invoices and other purchase documentation.

"Parties" means both Ross Video and Licensee and "Party" means either one of them as the context requires.

"Person" will be broadly interpreted and includes (a) a natural person, whether acting in his or her own capacity, or in his or her capacity as executor, administrator, estate trustee, trustee or personal or legal representative; (b) a corporation or a company of any kind, a partnership of any kind, a sole proprietorship, a trust, a joint venture, an association, an unincorporated association, an unincorporated syndicate, an unincorporated organization or any other association, organization or entity of any kind; and (c) a Governmental Authority.

"Primary System" means the Designated Equipment upon which the Software is installed and executed to deliver its intended functionality.

"Released Claims" has the meaning ascribed to it in Section 9(b).

"Released Parties" has the meaning ascribed to it in Section 9(b).

"Ross Video" means Ross Video Limited and its Affiliates.

"Software" means the version of the Object Code licensed and delivered to Licensee by Ross Video concurrently with delivery of this Agreement, including without limitation the Freeware, and any subsequent error corrections, updates, Modifications or Improvements provided to Licensee by Ross Video pursuant to this Agreement, but specifically excluding any features or plug-ins that may be purchased by you directly from third parties as upgrades or enhancements to the Software.

"Source Code" means the human readable form of a computer software program, and all tools and documentation necessary for a reasonably competent computer programmer to understand, maintain and Modify the Software.

"Third Party Software" means those portions of the Software, if any, which are owned or controlled by third parties and licensed to Ross Video pursuant to certain license agreements or arrangements with such third parties, including the Open Source Components and NDI®¹ software (<http://NDI.video>); and

"Use" means to execute, run, display, store, merge, network, Modify, translate, host or integrate with Licensee's products or other third party software.

¹ NDI® is a registered trademark of Vizrt NDI AB.

3. **LICENSE.** Subject to the terms and conditions of this Agreement, upon payment of the applicable License Fee by Licensee, or, in the case of Freeware only, upon download of the Software by Licensee onto its Designated Equipment, Ross Video hereby grants to Licensee a non-transferable and non-exclusive right to Use the Software and Documentation solely for the internal use of Licensee (the "License"), during the License Period. In the event that a License Period is not identified on the Order, such License Period shall be deemed to be perpetual, subject to paragraph 10 (c) of this Agreement. The Software shall only be used in connection with or installed on the Designated Equipment and, where applicable, shall only be used on the Primary System, provided such Primary System is operating properly."

If the Primary System is not operating properly for any reason, the Software may be used on the designated Backup System for that Primary System until such time that the Primary System begins operating properly. The Software and Documentation are provided to Licensee for the exclusive use by Licensee's organization for its ordinary business purposes and shall not be used by any third party for any purposes. Licensee may make copies of the Software as required for internal backup and archival purposes. To the extent permitted hereunder, Licensee may distribute copies of the Software and/or Documentation to members of its organization, provided (a) this Agreement is included with each copy, (b) any member of its organization who uses the Software and/or Documentation accepts and agrees to be bound by the terms of this Agreement and by any other license agreements or other agreement incorporated by reference into this Agreement, and (c) Licensee has paid any applicable additional License Fees in respect of copying and redistributing of the Software. To the extent Licensee is permitted to make copies of the Software under this Agreement, Licensee agrees to reproduce and include on any copy made or portion merged into another work, all Ross Video proprietary notices, including any notices with respect to copyrights, trademarks and this License. With the exception of copying the Software for backup or archival purposes, Licensee agrees to keep a record of the number and location of all such copies and will make such record available at Ross Video's request. The Software may include mechanisms to limit or inhibit copying.

4. **LICENSE RESTRICTIONS.** Except as otherwise provided in section 3 above, Licensee shall not: (1) copy any Software or Documentation, or part thereof, which is provided to Licensee by Ross Video pursuant to this Agreement, in Object Code form, Source Code form or other human or machine readable form, including written or printed documents, without the prior written consent of Ross Video; (2) in any way market, distribute, export, translate, transmit, merge, Modify, transfer, adapt, loan, rent, lease, assign, share, sub-license, sell, make available for download on any website or make available to another Person, the Software and/or Documentation, in whole or in part, provided that Licensee shall not be prohibited from renting or leasing the Software if Ross Video has consented, in writing, to Licensee engaging in such activities in respect of the Software; (3) reverse engineer, decompile or disassemble the Software or electronically transfer it into another computer language; or (4) use the Software or Documentation in a manner that is inconsistent with the License granted hereunder or that will result in a breach of this Agreement. Licensee agrees to take all reasonable precautions to prevent third parties from using the Software and/or Documentation in any way that would constitute a breach of this Agreement, including such precautions Licensee would ordinarily take to protect its own proprietary software, hardware or information.
5. **DELIVERY.** Ross Video shall deliver to Licensee one (1) master copy of the Software in compiled binary (executable) form suitable for reproduction in electronic files only and Ross Video shall deliver to Licensee a minimum of one copy of the Documentation.
6. **IMPROVEMENTS.** Licensee may from time to time request Ross Video to incorporate certain Improvements into the Software. Ross Video may, in its sole discretion, undertake to incorporate and provide such Improvements to Licensee with or without payment of a fee to be negotiated at the time of such request. All Improvements, whether recommended and developed by Ross Video or Licensee, shall be considered the sole property of Ross Video and shall be used by Licensee pursuant to the terms of the License granted under this Agreement.

7. **FREWARE.** Other than the obligation to pay a License Fee, which does not apply to the Freeware, all other provisions of this End User Software License Agreement apply to the Freeware in the same way as they apply to all other Software that is the subject of this Agreement. In addition, in connection with the Freeware, the following provisions apply:
- a. Licensee will not Use the Freeware to engage in or allow others to engage in any illegal activity.
 - b. Licensee will not Use the Freeware in any way that will interfere with or damage the operation of the services of any third parties by overburdening/disabling network resources through automated queries, excessive usage or similar conduct.
 - c. Licensee will not Use the Freeware to engage in any activity that will violate the rights of others, including, without limitation, by using it for operations that involve child labour, suppressing the right of freedom of expression or endangering the security of person.
8. **OWNERSHIP.** The Parties acknowledge and agree that, as between the Parties, Ross Video shall be the owner of all intellectual property rights in the Software, Documentation and all related Modifications and Improvements, written materials, logos, trademarks, trade names, copyright, patents, trade secrets and moral rights, registered or unregistered. No proprietary interest or title in or to the intellectual property in the Software, Documentation or any Improvements or Modifications is transferred to Licensee by this Agreement. Ross Video reserves all rights not expressly licensed to Licensee under section 3.
9. **OPEN SOURCE SOFTWARE.**
- a. Software may use and/or be provided with Open Source Components, including those detailed in the Third Party section below. To the extent stipulated by its Open Source License, each such Open Source Component is licensed directly to Licensee from its respective licensors and not sub-licensed to Licensee by Ross Video, and such Open Source Component is subject to its respective Open Source License, and not to this Agreement. If, and to the extent, an Open Source Component requires that this Agreement effectively impose, or incorporate by reference, certain disclaimers, permissions, provisions, prohibitions or restrictions, then such disclaimers, permissions, provisions, prohibitions or restrictions shall be deemed to be imposed, or incorporated by reference into this Agreement, as required, and shall supersede any conflicting provision of this Agreement, solely with respect to the corresponding Open Source Component which is governed by such Open Source License.
 - b. If Licensee, or another party on Licensee's behalf, modifies, replaces or substitutes any Open Source Component used in or provided with this Software, Licensee hereby fully, forever, irrevocably and unconditionally releases and discharges Ross Video, its Affiliates and its and their employees, officers, directors, resellers, distributors and representatives (collectively, "Released Parties") from any and all claims, charges, complaints, demands, actions, causes of action, suits, rights, debts, covenants, liabilities, warranties, performance and maintenance and support obligations (collectively, "Released Claims"), of every kind and nature, with respect to such Software, including without limitation any such Released Claims that arise as a matter of applicable Law.
 - c. If an Open Source License requires that the source code of its corresponding Open Source Component be made available to Licensee, and such source code was not delivered to Licensee with the Software, then Ross Video hereby extends a written offer, valid for the period prescribed in such Open Source License, to obtain a copy of the source code of the corresponding Open Source Component, from Ross Video from <https://www.rossvideo.com/open-source-information/>.

10. **THIRD PARTY SOFTWARE.**

- a. Licensee acknowledges that the Third Party Software is not owned by Ross Video. Notwithstanding any other provision of this Agreement, Ross Video, to the extent permitted by applicable law, offers no warranties (whether express, implied, statutory or by course of communication or dealing with Licensee, or otherwise) with respect to the Third Party Software. Ross Video may pass through to Licensee, if and to the extent permitted by applicable law, any warranties expressly provided by such third parties to Ross Video for such Third Party Software.
- b. FFmpeg Notice. The Software may utilize FFmpeg video components and their included libraries. FFmpeg is a trademark of Fabrice Bellard (originator of the FFmpeg project). Ross Video disclaims any ownership claim to FFmpeg. Please refer to <http://ffmpeg.org> (copyright is in the FFmpeg developers). FFmpeg is licensed under the GNU Lesser General Public License v2.1 or Lesser General Public License v3.0. GNU Lesser General Public License contact information: Free Software Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA. Licensee can distribute it and/or modify it under the terms of such licenses.

11. **INTELLECTUAL PROPERTY INDEMNITY.**

- a. Ross Video agrees to defend, indemnify and hold harmless Licensee from final damages awarded by a court of competent jurisdiction (hereinafter referred to as the "**Losses**"), which Licensee, or any of its officers or directors, may incur, suffer or become liable for as a result of, or in connection with, any third party claim asserted against Licensee to the extent such claim is based on a contention that the Software, Documentation or any portion thereof, infringes any valid, registered, enforceable patents, copyrights, trade secrets, trademarks or other intellectual property rights of any third party, provided that (a) the allegedly infringing Software or Documentation has been used within the scope of and in accordance with the terms of this Agreement, and (b) Licensee notifies Ross Video in writing of such claim within ten (10) days of a responsible officer of Licensee becoming aware of such claim. If the Software, Documentation or any portion thereof is held to constitute an infringement of a third party's intellectual property rights, and use thereof is enjoined, Ross Video shall, at its election and expense, either (i) procure the right to use the infringing element of the Software or Documentation; or (ii) replace or modify the element of the Software or Documentation so that the infringing portion is no longer infringing and still performs the same function without any material loss of functionality. Ross Video shall make every reasonable effort to correct the situation with minimal effect upon the operations of Licensee.
- b. Notwithstanding the above, Ross Video reserves the right to terminate this Agreement and the License granted hereunder on immediate notice to Licensee, and without liability to Licensee, in the event that the Software or Documentation constitutes or may, in Ross Video's determination, constitute, an infringement of the rights of a third party that Ross Video, in its sole discretion, does not consider to be affordably remediable.
- c. Either party may terminate this Agreement immediately should any Software become, or in either party's opinion be likely to become, the subject of a claim of infringement of any intellectual property right and, in such event, there shall be no claim by either Licensee or Ross Video against the other arising out of such termination, provided that the foregoing shall not apply to a claim for infringement by Ross Video against Licensee in the event that Licensee is alleged to have infringed Ross Video's intellectual property rights, in which case Licensee shall remain liable for all outstanding License Fees and other amounts owing to Ross Video.
- d. Notwithstanding the foregoing, Ross Video shall have no liability for any claim of infringement based on use of other than a current, unaltered release of the Software and/or Documentation available from Ross Video if such infringement would have been avoided by the use of a current, unaltered release of the Software and/or Documentation provided that such current, unaltered release performs substantially in conformity with the specifications set out in the Documentation and was provided, at no additional cost by Ross Video, to those subscribing for maintenance services for the Software or Documentation.

12. **CONFIDENTIALITY.** Each Party shall maintain in confidence all Confidential Information of the other Party, shall use such Confidential Information only for the purpose of exercising its rights and fulfilling its obligations under this Agreement, and shall not disclose any Confidential Information of the disclosing Party to any third party except as expressly permitted hereunder or make any unauthorized use thereof. Each Party shall disclose the Confidential Information only to those of its employees, consultants, advisors, and/or subcontractors who have a need to know the Confidential Information. Each Party shall, prior to disclosing the Confidential Information to such employees, consultants, advisors and/or subcontractors, obtain their agreement to receive and use the Confidential Information on a confidential basis on the same terms and conditions contained in this Agreement. The receiving Party shall treat the Confidential Information of the disclosing Party with the same degree of care against disclosure and/or unauthorized use as it affords to its own information of a similar nature, or a reasonable degree of care, whichever is greater. The receiving Party further agrees not to remove or destroy any proprietary or confidential legends or markings placed upon any documents or other materials of the disclosing Party. The obligations of confidence set forth in this Agreement shall extend to any Affiliates that have received Confidential Information of the disclosing Party and shall also cover Confidential Information disclosed by any Affiliate. The receiving Party shall be responsible for any actions or omissions of its Affiliates as if such actions or omissions were its own.

Either party may disclose certain Confidential Information if it is expressly required to do so pursuant to legal, judicial, or administrative proceedings, or otherwise required by law, provided that (i) such Party provides the other Party with reasonable written notice prior to such disclosure; (ii) such Party seeks confidential treatment for such Confidential Information; (iii) the extent of such disclosure is only to the extent expressly required by law or under the applicable court order; and (iv) such Party complies with any applicable protective or equivalent order.

Each of Ross Video and Licensee (the "**Indemnifying Party**", as applicable) agree to indemnify the other (the "**Indemnified Party**", as applicable) for all Losses incurred by the Indemnified Party as a result of a failure of the Indemnifying Party to comply with its obligations under this Section 12 provided that the Indemnified Party has given prompt notice of any such claim and, to the extent that a claim may lie against a third party for the unauthorized disclosure of such Confidential Information, the right to control and direct the investigation, preparation, action and settlement of each such claim and, further, provided that the Indemnified Party reasonably co-operates with the Indemnifying Party in connection with the foregoing and provides the Indemnifying Party with all information in the Indemnified Party's possession related to such claim and such further assistance as reasonably requested by the Indemnifying Party.

The Parties acknowledge and agree that any breach of the confidentiality provisions of this Agreement by one Party may cause significant and irreparable injury to the other Party that is not compensable monetarily, as well as damages that may be difficult to ascertain, and agrees that, in addition to such other remedies that may be available at law or in equity, the other Party shall be entitled to seek injunctive relief (including temporary restraining orders, interim injunctions and permanent injunctions) in a court of competent jurisdiction in the event of the breach or threatened breach by such party of any of the confidentiality provisions of this Agreement. The relief contemplated in this Section shall be available to each Party without the necessity of having to prove actual damages and without the necessity of having to post any bond or other security. Each Party further agrees to notify the other Party in the event that it learns of or has reason to believe that any Person has breached the confidentiality provisions of this Agreement.

13. **LIMITATION OF LIABILITY.** The limitation of liability provisions of this Agreement reflect an informed voluntary allocation of the risks (known and unknown) that may exist in connection with the licensing of the Software or Documentation hereunder by Ross Video, and that voluntary risk allocation represents a material part of the Agreement reached between Ross Video and Licensee. Should Ross Video be in breach of any obligation, Licensee agrees that Licensee's remedies will be limited to those set forth in this Agreement. No action, regardless of form, arising out of this Agreement may be brought by Licensee more than twelve (12) months after the facts giving rise to the cause of action have occurred, regardless of whether those facts by that time are known to, or reasonably ought to have been discovered by, Licensee.

(A) EXCEPT AS EXPRESSLY PROVIDED IN THIS AGREEMENT, THE SOFTWARE AND DOCUMENTATION ARE PROVIDED "AS IS" AND ROSS VIDEO (I) MAKES NO OTHER REPRESENTATIONS, AND PROVIDES NO WARRANTIES OR CONDITIONS OF ANY KIND, EXPRESS OR IMPLIED, STATUTORY, BY USAGE OF TRADE CUSTOM OF DEALING, OR OTHERWISE, AND (II) SPECIFICALLY DISCLAIMS ALL IMPLIED WARRANTIES INCLUDING ANY IMPLIED WARRANTY OF UNINTERRUPTED OR ERROR FREE OPERATION, MERCHANTABILITY, QUALITY OR FITNESS FOR A PARTICULAR PURPOSE. ROSS VIDEO DOES NOT REPRESENT OR WARRANT THAT THE SOFTWARE WILL MEET ANY OR ALL OF LICENSEE'S PARTICULAR REQUIREMENTS, THAT THE USE AND OPERATION OF THE SOFTWARE WILL OPERATE ERROR-FREE OR UNINTERRUPTED, THAT ALL PROGRAMMING ERRORS IN THE SOFTWARE CAN BE FOUND IN ORDER TO BE CORRECTED, OR THAT THE SOFTWARE WILL BE COMPATIBLE WITH OTHER PROGRAMS, SYSTEMS, AND HARDWARE.

(B) IN NO EVENT SHALL ROSS VIDEO, ITS AFFILIATES AND LICENSORS, AND THEIR RESPECTIVE DIRECTORS, OFFICERS, EMPLOYEES AND AGENTS, BE LIABLE FOR ANY CLAIM FOR INDIRECT, CONSEQUENTIAL, SPECIAL, INCIDENTAL, PUNITIVE, EXEMPLARY, AGGRAVATED DAMAGES; LOST PROFITS, OR LOST REVENUE ARISING FROM OR IN CONNECTION WITH THIS AGREEMENT, REGARDLESS OF THE FORM OF ACTION, WHETHER IN CONTRACT, OR IN TORT, EVEN IF THE PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

(C) IN ANY EVENT THE AGGREGATE LIABILITY OF ROSS VIDEO, ITS AFFILIATES AND LICENSORS, AND THEIR RESPECTIVE DIRECTORS, OFFICERS, EMPLOYEES AND AGENTS, FOR ANY CLAIM FOR DIRECT DAMAGES WITH RESPECT TO THE SUBJECT MATTER OF THIS AGREEMENT SHALL NOT EXCEED THE AMOUNT OF THE PURCHASE PRICE PAID TO ROSS VIDEO UNDER THIS AGREEMENT.

14. **TERM AND TERMINATION.**

- (1) Unless terminated earlier in accordance with the terms of this Agreement, the term of this Agreement shall commence upon Licensee's first download, access, installation, or other use of the Software or Documentation and continues until, in the case of Software licensed with Designated Equipment provided by Ross Video, the earliest of (a) the end of the License Period, or (b) if the Designated Equipment is assigned or transferred in accordance with this Agreement, the date on which the Designated Equipment is no longer owned by Licensee;
- (2) Either Party shall have the right to terminate this Agreement on notice to the other Party if:
- (a) the other Party fails to pay any fees or other amounts when due hereunder or under any other agreement between the Parties (or any Affiliates of the Parties, as applicable) in connection with the Software and/or Designated Equipment and such breach is not cured within thirty (30) days after written notice of such failure to pay is given to the defaulting Party by the non-defaulting Party;
 - (b) the other Party shall file a voluntary petition in bankruptcy or insolvency or shall petition for reorganization under any bankruptcy law, consent to an involuntary petition in bankruptcy, or if a receiving order is given against it under the Bankruptcy and Insolvency Act (Canada) or the comparable law of any other jurisdiction (and such is not dismissed within ten (10) days);

- (c) there shall be entered an order, judgment or decree by a court of competent jurisdiction, upon the application of a creditor, approving a petition seeking reorganization or appointing a receiver, trustee or liquidator of all or a substantial part of the other Party's assets and such order, judgment or decree continues in effect for a period of thirty (30) consecutive days; or
- (d) the other Party shall fail to perform any of the other material obligations set forth in this Agreement and such default, in the case of a default which is remediable, continues for a period of thirty (30) days after written notice of such failure has been given by the non-defaulting Party or, in the case of a non-remediable default, immediately upon notice.

(3) Notwithstanding anything to the contrary contained in this Agreement:

- (a) Ross Video may forthwith terminate this Agreement if Licensee is in breach of any of sections 3, 4 or 12 of this Agreement. For greater certainty, in such instances Ross Video shall provide written notice of such termination as soon as practicable but written notice shall not be a necessary prerequisite to such termination; and
- (b) in the event of a Change of Control of Licensee, Ross Video shall have the right to terminate this Agreement and the License granted hereunder upon thirty (30) days' prior written notice to Licensee. For greater certainty, Ross Video's right to terminate in the event of a Change of Control of Licensee shall continue for a period of six (6) months from the date Licensee delivers notice of such Change of Control to Ross Video.
- (c) Ross Video may terminate the License immediately on the date on which it provides notice to Licensee, if its agreements for Third Party Software are terminated.

(4) Upon the termination or expiry of this Agreement:

- (a) Licensee shall immediately cease and desist all use of the Software and Documentation;
- (b) Licensee shall immediately deliver to Ross Video any of Ross Video's Confidential Information provided hereunder (including the Software and Documentation) then in its possession or control, if any, and shall deliver a certificate of an officer of Licensee certifying the completeness of same;
- (c) Licensee shall refrain from further use of such Confidential Information; and
- (d) Licensee shall forthwith pay all amounts owing to Ross Video or any of its Affiliates hereunder.

- 15. **SURVIVAL.** The provisions of sections 1, 2, 6, 8, 9, 10, 11, 12, 13, 14, 18, 22, 23, and 24 herein shall survive the expiry or termination of this Agreement.
- 16. **FORCE MAJEURE.** Dates and times by which Ross Video is required to render performance under this Agreement shall be automatically postponed to the extent and for the period that Ross Video is prevented from meeting them by reason of events of force majeure or any cause beyond its reasonable control provided Ross Video notifies Licensee of the commencement and nature of such cause and uses its reasonable efforts to render performance in a timely manner.
- 17. **ASSIGNMENT.** Ross Video may assign this Agreement, or any of its rights or obligations hereunder, in whole or in part, upon notice to Licensee. Licensee shall not assign this Agreement, or any of its rights or obligations hereunder, in whole or in part, without the prior written consent of Ross Video, which consent may not be unreasonably withheld. This Agreement enures to the benefit of and is binding upon each of the Parties and their respective successors and permitted assigns.

18. **GOVERNING LAW.** If Licensee acquired the Ross Product(s) in the United States or Canada, the laws of the state or province where Licensee's principal place of business is located govern the interpretation of this Agreement, claims for its breach, and all other claims regardless of conflict of laws principles. If Licensee acquired the Ross Product(s) in the European Union or the United Kingdom, then the laws of England and Wales apply. If Licensee acquired the Ross Product(s) in any other country, then the laws of the Province of Ontario, Canada shall apply.
19. **LANGUAGE.** The Parties have expressly required that this Agreement and all documents relating thereto be prepared in English. Les parties ont expressément exigé que cette convention ainsi que tous les documents qui s'y rattachent soient rédigés en anglais.
20. **GOVERNMENT CONTRACTS.** If the Software and/or Documentation to be furnished to Licensee hereunder are to be used in the performance of a government contract or subcontract, the Software and/or Documentation shall be provided on a "restricted rights" basis only and Licensee shall place a legend, in addition to applicable copyright notices, in the form provided under the applicable governmental regulations. For greater certainty, Ross Video shall not be subject to any flow-down provisions required by any customer of Licensee that is a Governmental Authority unless Ross Video expressly agrees to be bound by such flow-down provisions in writing.
21. **EXPORT AND IMPORT LAWS.** Licensee acknowledges and agrees that the Software (including any technical data and related technology) may be subject to the export control laws, rules, regulations, restrictions and national security controls of the United States and other applicable countries (the "**Export Controls**") and agrees not to export, re-export, import or allow the export, re-export or import of such export-controlled Software (including any technical data and related technology) or any copy, portion or direct product of the foregoing in violation of the Export Controls. Licensee hereby represents that it is not an entity or person to whom provision of the Software (including any technical data and related technology) is restricted or prohibited by the Export Controls. Licensee agrees that it has the sole responsibility to obtain any authorization to export, re-export, or import the Software (including any technical data and related technology), as may be required. Licensee will defend, indemnify and hold Ross Video harmless from any and all claims, losses, liabilities, damages, fines, penalties, costs and expenses (including attorney's fees) arising from or relating to any breach by Licensee of its obligations under this Section.
22. **AMENDMENT AND WAIVER.** No amendment, discharge, modification, restatement, supplement, termination or waiver of this Agreement or any Section of this Agreement is binding unless it is in writing and executed by the Party to be bound. No waiver of, failure to exercise or delay in exercising, any Section of this Agreement constitutes a waiver of any other Section (whether or not similar) nor does any waiver constitute a continuing waiver unless otherwise expressly provided.
23. **SEVERABILITY.** Each Section of this Agreement is distinct and severable. If any Section of this Agreement, in whole or in part, is or becomes illegal, invalid, void, voidable or unenforceable in any jurisdiction by any court of competent jurisdiction, the illegality, invalidity or unenforceability of that Section, in whole or in part, will not affect (a) the legality, validity or enforceability of the remaining Sections of this Agreement, in whole or in part; or (b) the legality, validity or enforceability of that Section, in whole or in part, in any other jurisdiction.
24. **ENTIRE AGREEMENT.** This Agreement, and any other documents referred to herein, constitutes the entire agreement between the Parties relating to the subject matter of this Agreement and supersedes all prior written or oral agreements, representations and other communications between the Parties.

Updated: November 1, 2023

Warranty and Repair Policy

Ross Video Limited (Ross) warrants its XPression Touch Factory systems to be free from defects under normal use and service for the following time periods from the date of shipment:

- XPression Touch Factory Server — 12 months
- XPression Touch Factory Software Upgrades — 12 months free of charge
- System and Media hard drives — 12 months

If an item becomes defective within the warranty period Ross will repair or replace the defective item, as determined solely by Ross.

Warranty repairs will be conducted at Ross, with all shipping FOB Ross dock. If repairs are conducted at the customer site, reasonable out-of-pocket charges will apply. At the discretion of Ross, and on a temporary loan basis, plug in circuit boards or other replacement parts may be supplied free of charge while defective items undergo repair. Return packing, shipping, and special handling costs are the responsibility of the customer.

This warranty is void if products are subjected to misuse, neglect, accident, improper installation or application, or unauthorized modification.

In no event shall Ross Video Limited be liable for direct, indirect, special, incidental, or consequential damages (including loss of profit). Implied warranties, including that of merchantability and fitness for a particular purpose, are expressly limited to the duration of this warranty.

This warranty is TRANSFERABLE to subsequent owners, subject to Ross' notification of change of ownership.

Extended Warranty

For customers that require a longer warranty period, Ross offers an extended warranty plan to extend the standard warranty period by one year increments. For more information about an extended warranty for your XPression Touch Factory system, contact your regional sales manager.

Environmental Information

The equipment that you purchased required the extraction and use of natural resources for its production. It may contain hazardous substances that could impact health and the environment.

To avoid the potential release of those substances into the environment and to diminish the need for the extraction of natural resources, Ross Video encourages you to use the appropriate take-back systems. These systems will reuse or recycle most of the materials from your end-of-life equipment in an environmentally friendly and health conscious manner.

The crossed-out wheeled bin symbol invites you to use these systems.



If you need more information on the collection, reuse, and recycling systems, please contact your local or regional waste administration.

You can also contact Ross Video for more information on the environmental performances of our products.

Company Address

Ross Video Limited

8 John Street
Iroquois, Ontario
Canada, K0E 1K0

Ross Video Incorporated

P.O. Box 880
Ogdensburg, New York
USA 13669-0880

General Business Office:

(+1) 613 · 652 · 4886

Fax:

(+1) 613 · 652 · 4425

Toll Free Technical Support:

1-844-652-0645 (North America)
+800 3540 3545 (International)

Alternately, you can contact:

Technical Support:

(+1) 613 · 652 · 4886

After Hours Emergency:

(+1) 613 · 349 · 0006

E-mail for Technical Support:

techsupport@rossvideo.com

E-mail for General Information:

solutions@rossvideo.com

Website:

<http://www.rossvideo.com>

Contents

Introduction	1
About This Guide	2
Getting Help	3
Hardware and Software Information	4
Software Installation and Configuration	5
Installing XPression Touch Factory	6
Configuring Touch Factory Settings	9
General Settings	10
Interaction Settings	11
Network Settings	13
Client Settings	14
Save and Exit Settings	16
Starting XPression Touch Factory Designer	17
Scenes and Actions Setup	22
Prefixes and Definitions	23
Scenes Setup	24
Action Creation	27
Multi Touch (Optional)	32
Review Actions List	34
Operation	36
Saving and Loading Files	37
Viewing the Console Window	39
Playing a Touch Workflow	40
Additional Play Settings	41
Making Changes to Your XPression Project	43
Remote Configuration	44
Touch Factory Client Setup	45
Touch Factory Setup	48
Client Configuration	49
Running the Touch Factory Client	50

Touch Factory Player	51
Installing Touch Factory Player	52
Configuring Touch Factory Player	55
Adding and Removing Project Files	56
Showing/Hiding the Console	58
Enabling/Disabling the Extended Console	59
Configuring Settings	60
General Settings	61
Window Settings	63
Interaction Settings	64
Client Settings	66
Saving Settings	68
Starting Touch Factory Player in Server Mode	69
Starting Touch Factory Player in Standalone Mode	70
Closing Touch Factory Player	71
Keyboard Shortcuts for Running Touch Factory Player in Standalone Mode	72

Introduction

XPression Touch Factory is touchscreen control software for live presentations using scenes from the XPression Real-Time Motion Graphics system. It allows on-camera talent to interactively navigate graphical content, videos and animations using a touchscreen-enabled monitor.

Touch Factory supports live data through the XPression Datalinq Server. Dynamic content graphics with continuous data feeds, like elections, weather, and finance are all possible with Touch Factory.

Touch Factory operates in a client-server mode. If it is not possible to run Touch Factory directly on an XPression system, another client PC may be used to intercept the touch data for relaying back to the XPression engine.

If you are using multiple touchscreens, Touch Factory Player is available as a cost-effective read-only playback tool for presentations created from the full version of Touch Factory. There is also a remote control option for using tablets to drive presentations where the presenter does not need to turn their back to the audience to advance the content. For dual-channel XPression systems there is an option to use the second channel as an additional screen for multi-monitor productions.

About This Guide

If, at any time, you have a question pertaining to the operation of the XPression Touch Factory system, please contact Ross Video at the numbers listed in the section [Contacting Technical Support](#)³. Our technical staff are always available for consultation, training, or service.

Documentation Conventions

Special text formats are used in this guide to identify parts of the user interface, text that a user must enter, or a sequence of menus and sub-menus that must be followed to reach a particular command.

Bold text

Bold text identifies a user interface element such as a dialog box, menu item, or button.

For example:

In the **Slug** column, type a slug name for the story.

Italic text

Italic text is used to identify the titles of referenced guides, manuals, or documents.

For example:

For more information, refer to the *DashBoard User Guide*.

`Courier text`

Courier text identifies text that a user must type.

For example:

In the **Username** box, type `postgres`.

Menu Sequences

Menu arrows are used in procedures to identify a sequence of menu items that you must follow.

For example:

If a step reads **Server > Save As**, you would select the **Server** menu and then select **Save As**.

[Hypertext](#)

Identifies a hyperlink to a related topic.

Getting Help

XPression Touch Factory documentation is available online at [Product Documentation](#) and is also accessible on the product USB key and by selecting the **Help** icon in the user interface.

Contacting Technical Support

At Ross Video, we take pride in the quality of our products, but if problems occur, help is as close as the nearest telephone.

Our 24-hour Hot Line service ensures you have access to technical expertise around the clock. After-sales service and technical support is provided directly by Ross Video personnel. During business hours (Eastern Time), technical support personnel are available by telephone. After hours and on weekends, a direct emergency technical support phone line is available. If the technical support person who is on call does not answer this line immediately, a voice message can be left and the call will be returned shortly. This team of highly trained staff is available to react to any problem and to do whatever is necessary to ensure customer satisfaction.

Technical Support:

- 1-844-652-0645 (North America)
- +800 3540 3545 (International)
- After Hours Emergency: (+1) 613-349-0006
- E-mail: techsupport@rossvideo.com
- Website: <http://www.rossvideo.com>

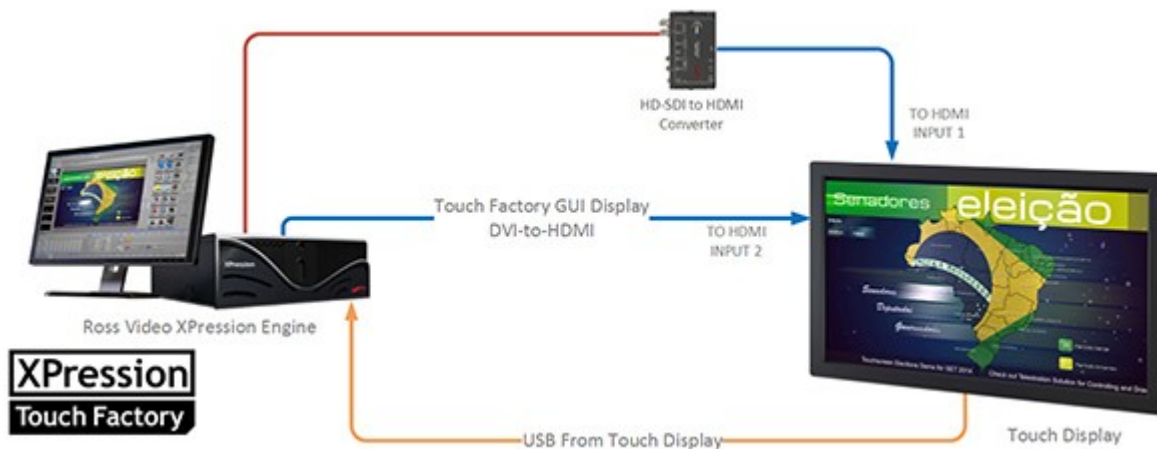
Hardware and Software Information

Hardware Components

Touch Factory requires the following hardware components:

- Computer:
 - Windows 7 Pro Operating System
 - Full HD 1920 x1080 resolution graphics card
- Touchscreen:
 - Full HD 1920 x1080 touchscreen display resolution
- API automation (one of the following):
 - XPression Studio/Studio SCE/Studio 4K
 - XPression Studio GO!
 - XPression BlueBox/BlueBox SCE/BlueBox 4K
 - XPression Developer
- Cables:
 - SDI signal cable with an HD-SDI to HDMI converter and HDMI cable
 - DVI to HDMI cable
 - USB cable

The following diagram illustrates a basic Touch Factory hardware setup.



Touch Factory Hardware Setup

XPression Software Version

Touch Factory v1.0 Rev 2 requires XPression software version 6.5.3603 or higher.

Software Installation and Configuration

This chapter covers the following topics:

[Installing XPression Touch Factory](#)  6

[Configuring XPression Touch Factory Settings](#)  9

[Starting XPression Touch Factory Designer](#)  17

Installing XPression Touch Factory

By default, Touch Factory is installed in the **C:\XPressionApps\Touch Factory** folder, and creates a **Start** menu folder called XPression Touch Factory that includes shortcuts to launch **Touch Factory**, **Touch Factory Settings**, and the **Change History** log.

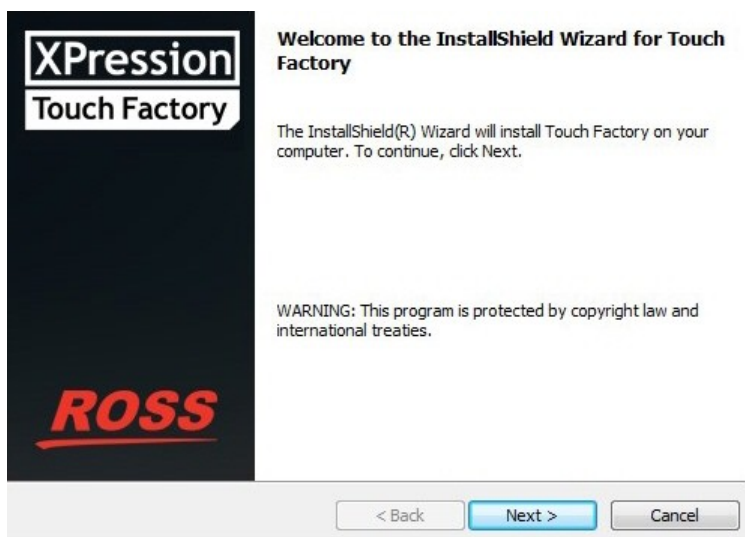
Also, desktop shortcuts are created for **Touch Factory** and **Touch Factory Settings**.

Each version of Touch Factory is developed to work with a specific version of XPression, as noted in the **.exe** file name. Make sure you are installing the correct version of Touch Factory for your XPression installation.

To install Touch Factory:

1. Launch the **TouchFactory.exe** file.

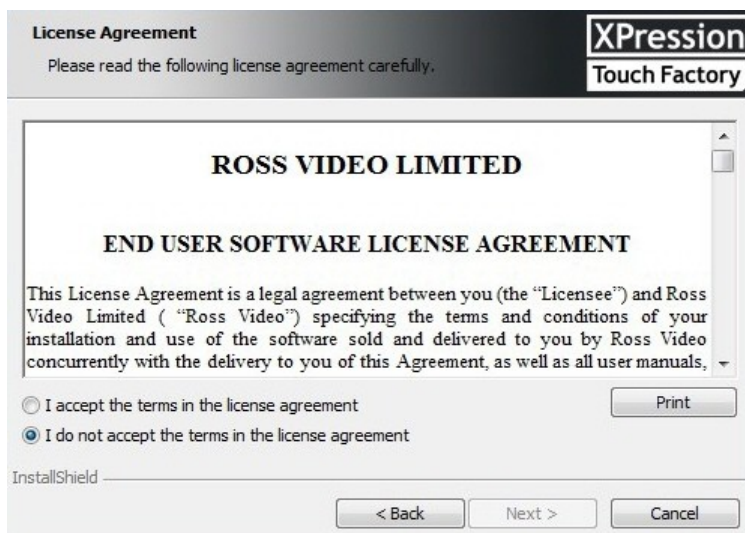
The **Touch Factory - InstallShield Wizard** opens.



Touch Factory Install - Welcome Page

2. Select **Next**.

The **License Agreement** opens.



License Agreement

3. Select the **I accept the terms in the license agreement** radio button and then select **Next**.

The **Customer Information** page opens.

The screenshot shows the 'Customer Information' window. The title bar says 'Customer Information' and 'XPression Touch Factory'. Below the title bar, it says 'Please enter your information.' There are two text input fields: 'User Name:' with 'xpnqo' entered, and 'Organization:' which is empty. At the bottom, there are three buttons: '< Back', 'Next >', and 'Cancel'. The 'Next >' button is highlighted in blue. The 'InstallShield' logo is visible in the bottom left corner.

Customer Information

4. Enter a user name in the **User Name** field and the name of your organization in the **Organization** field and then select **Next**.

The **Ready to Install the Program** page opens.

The screenshot shows the 'Ready to Install the Program' window. The title bar says 'Ready to Install the Program' and 'XPression Touch Factory'. Below the title bar, it says 'The wizard is ready to begin installation.' There is a paragraph of text: 'If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.' Below this is a section titled 'Current Settings:' which contains a list of settings: 'Setup Type: Typical', 'Destination Folder: C:\XPressionApps\Touch Factory\', and 'User Information: Name: xpnqo, Company:'. At the bottom, there are three buttons: '< Back', 'Install', and 'Cancel'. The 'Install' button is highlighted in blue. The 'InstallShield' logo is visible in the bottom left corner.

Ready to Install

5. Select **Install**.

The application installs and the **InstallShield Wizard Completed** page opens.



Installation Complete

6. Select **Finish**.

The **Touch Factory - InstallShield Wizard** closes.

If this is the first time running the installer, the **Touch Factory Settings** dialog opens.

If this is not the first time running the installer and you left the **Launch the program checkbox** checked, Touch Factory is launched.

Configuring Touch Factory Settings

You can access the Touch Factory Settings from the **Start** menu or the desktop icon. It also automatically launches after the first time installing Touch Factory.

Use the Touch Factory Settings to configure the general, interaction, network, and client settings using the respective tabs.

Any changes made to the Touch Factory Settings after the initial setup require a restart of Touch Factory to take effect.

See the following sections for details:

[General Settings](#)  10

[Interaction Settings](#)  11

[Network Settings](#)  13

[Client Settings](#)  14

[Save and Exit Settings](#)  16

General Settings

Use the **General** tab to configure output and display settings for Touch Factory.

General | Interaction | Network | Client

Frame Buffer: 1

Touch Overlay Screen: 2

Designer/Scene Setup Screen: 2

Opacity: 50

Line stroke size: 1

Include Prefix in Referrer Key: ☐

If checked, refererButton dataling key will keep the button_ prefix on its value. If unchecked, the prefix button will be removed before setting the dataling key

Default Configuration | Reload Configuration

Save | Save & Launch | Exit

Touch Factory Settings - General Tab

The settings are described in the table below.

Setting	Description
Frame Buffer	Enter or select the output frame buffer that Touch Factory will use for the scene. Valid values: 1 and over Default value: 1
Touch Overlay Screen	Enter or select the number of the monitor that will be used as the touch screen. This monitor will run in full screen mode and detect the mouse and touch events.
Designer/Scene Setup Screen	Enter or select the number of the monitor that will display the Touch Factory Designer.
Opacity	Enter or select the level of transparency for the main window. Low values are useful for testing purposes, particularly when only one monitor is used and Touch Factory is being run and displayed on the same machine with a virtual output. Valid values: 1 to 100 Default value: 50
Line stroke size	Enter or select the thickness for the touch drawing/highlighter. Valid values: 1 to 50 Default value: 10
Include Prefix in Referrer Key	Select this checkbox to include the "button_" prefix of the source object (if it exists). When a new scene is put online, the name of the object that was pressed/touched before the new scene was put online is saved as the refererButton DataLinq key, including the full name of the object.

Interaction Settings

Use the **Interaction** tab to configure the touch and sensitivity settings.

General Interaction Network Client

Mode: Mouse

Minimum drawing distance (px): 32

Minimum multitouch distance (px): 15

Minimum scale (finger) distance (px): 20

Drawing interval (ms): 50

Rotation sensitivity: 0.50

Drag sensitivity: 1.00

Scale sensitivity: 0.002

Minimum scale: 0.100

Default Configuration Reload Configuration

Save Save & Launch Exit

Touch Factory Settings - Interaction Tab

Touch Factory can detect actions from the user using a standard mouse input or a touchscreen.

Touchscreen mode is more sensitive than **Mouse** mode but only works in newer touch displays. For testing purposes, we recommend using **Mouse** mode, since it is compatible with most of the touch devices and you can use a standard mouse to trigger Touch Factory interactions.

★ The default values for the interaction settings are strongly recommended unless Touch Factory is not running properly in your system.

The settings are described in the table below.

Setting	Description
Mode	Use the drop-down to select the input mode. Valid values: Mouse and Touchscreen
Minimum drawing distance (px)	Enter or select the minimum distance in pixels (sensitivity) between consecutive touch actions that is going to be used for drawing a straight line between both points. Valid values: 5 to 100 Default value: 32
Minimum multitouch distance (px)	Enter or select the minimum distance in pixels (sensitivity) between two consecutive touch actions to detect a multi-touch interaction. Valid values: 5 to 100 Default value: 15

Minimum scale (finger) distance (px)	Enter or select the minimum distance in pixels (sensitivity) between the two fingers while scaling a multi-touchable object. Valid values: 5 to 200 Default value: 20
Drawing interval (ms)	Enter or select the amount of time in milliseconds between the drawing of one line and the next. This parameter works together with the minimum drawing distance in pixels to set the sensitivity on the drawing/highlighter functionality. Valid values: 10 to 1000 Default value: 50
Rotation sensitivity	Enter or select a value to increase/decrease the sensitivity of a multi-touch rotation action. Valid values: 0.01 to 2.00 Default value: 0.50
Drag sensitivity	Enter or select a value to increase/decrease the sensitivity of a multi-touch drag action. Valid values: 0.001 to 2.00 Default value: 1.00
Scale sensitivity	Enter or select a value to increase/decrease the sensitivity of a multi-touch scale action. Valid values: 0.001to 2.000 Default value: 0.002
Minimum scale	Enter or select the minimum scale value of an object if resizing it. This prevents resizing an element to such a small size that the user will not be able to interact with it. Valid values: -1.000 to 1.000 Default value: 0.100

Network Settings

General

Interaction

Network

Client

Data Port:

0

Web Port:

0

Default Configuration

Reload Configuration

Save

Save & Launch

Exit

Touch Factory Settings - Network Tab

The settings are described in the table below.

Setting	Description
Data Port	Enter or select the number for the UDP port required for remote clients to communicate with Touch Factory when running in Server Mode .
Web Port	Enter or select the number for the TCP port required for the remote web browser to control Touch Factory.

Client Settings

Touch Factory supports up to two optional client applications for remote control. This is primarily designed to have one client for the touch display that is controlled using a remote computer, and a second wireless touch device (such as a tablet) that can be used by the talent.

★ Remote control requires an additional license.

Use the **Client** tab to configure the Touch Factory remote client settings.

The screenshot shows the 'Client' tab in the Touch Factory Settings window. The 'Enable Client Applications' checkbox is unchecked. Below it, the 'PC (Ethernet)' section has 'Host IP' set to 127.0.0.1, 'Port' set to 9997, 'Enable Streaming - PC' checked, and 'Image Quality' set to Low. The 'Tablet (Wi-Fi)' section has 'Host IP' set to 127.0.0.1, 'Port' set to 9997, 'Enable Streaming - Tablet' checked, and 'Image Quality' set to Low. At the bottom, there are buttons for 'Default Configuration', 'Reload Configuration', 'Save', 'Save & Launch', and 'Exit'.

Touch Factory Settings - Client Tab (Client Applications Disabled)

To configure the client settings:

1. In the **Client** tab, select the **Enable Client Applications** checkbox to communicate with the **UDP** data port defined in the [Network](#) ¹³ tab.

The default port is **9091**. The data port number can be changed in the [Network](#) ¹³ tab.

The **PC (Ethernet)** and **Tablet (Wi-Fi)** settings become available.

The screenshot shows the 'Client' tab in the Touch Factory Settings window. The 'Enable Client Applications' checkbox is now checked. The 'PC (Ethernet)' and 'Tablet (Wi-Fi)' sections remain the same as in the previous screenshot, with 'Host IP' set to 127.0.0.1, 'Port' set to 9997, 'Enable Streaming' checked, and 'Image Quality' set to Low. The buttons at the bottom are still present.

Touch Factory Settings - Client Tab (Client Applications Enabled)

2. Configure the PC or Tablet settings as follows:

PC (Ethernet)

- a. In the **PC (Ethernet)** section, in the **Host IP** field, enter the IP address of the remote client PC.
- b. In the **Port** field, enter or select the port number of the remote client PC.

The default port is **9997**.

- c. If you want to stream the output framebuffer frames (at approximately one frame per second) from XPression to the client application, select the **Enable Streaming - PC** checkbox.

You can enable streaming on up to two devices.

- d. Then from the **Image Quality** drop-down, select the resolution of the frames that are streamed from XPression to the client application.

Frames are streamed at approximately one frame per second.

The options are:

- **Low** (this is the default and recommended setting)
- **Medium**
- **High**

Tablet (Wi-Fi)

- a. In the **Tablet (Wi-Fi)** section, in the **Host IP** field, enter the IP address of the remote client tablet.
- b. In the **Port** field, enter or select the port number of the remote client tablet.

The default port is **9998**.

- c. If you want to stream the output framebuffer frames (at approximately one frame per second) from XPression to the client application, select the **Enable Streaming - Tablet** checkbox.

You can enable streaming on up to two devices.

- d. Then from the **Image Quality** drop-down, select the resolution of the frames that are streamed from XPression to the client application.

Frames are streamed at approximately one frame per second.

The options are:

- **Low** (this is the default and recommended setting)
- **Medium**
- **High**

3. Select **Save**.

The client settings are saved and Touch Factory will operate in **Server Mode** when **Play** is pressed.

It is recommended that the console window be enabled in Touch Factory when using client applications. To enable the console window, select **Options > Show Console** in the Touch Factory Designer window.

When Touch Factory is listening to network commands, the Touch Factory Designer window will be hidden. This way, Touch Factory can run in the background while XPression is being used for other purposes.

Do not use the same output framebuffer on XPression while Touch Factory is running in the background.

Save and Exit Settings

Once the Touch Factory settings have been configured, select one of the following buttons:

- To revert the settings of all tabs to the default configuration, select **Default Configuration**.
- To restore your last saved configuration, select **Reload Configuration**.

Touch Factory will need to be shut down and restarted for the settings to be reloaded.

- To save the current configuration to the configuration file, select **Save**.

The Touch Factory settings are saved to the **touchfactory.cfg** file located in the Touch Factory installation folder at **C:\XPressionApps\Touch Factory**.

- To save the current configuration and immediately launch the Touch Factory Designer, select **Save & Launch**.
- To exit the Touch Factory Settings without saving any changes or to exit after saving the configuration, select **Exit**.

Starting XPression Touch Factory Designer

The Touch Factory Designer is a tab-based, step-by-step application that allows you to define the touch workflow for your project, selecting which elements can be triggered by touch, and what will happen when the element is triggered.

Before starting Touch Factory, you will need to plug the green XPression Touch Factory USB license dongle into the internal USB port of your XPression machine.

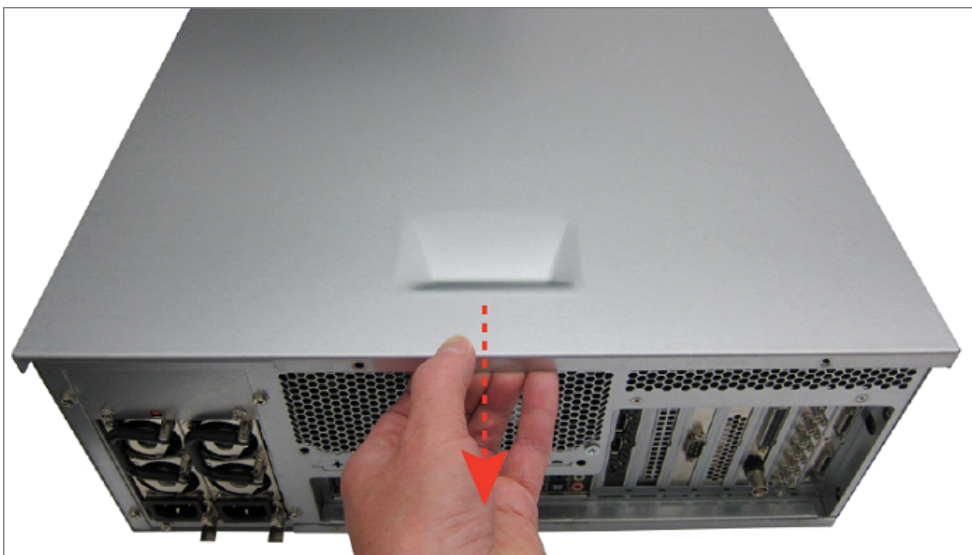
To plug in the license dongle:

1. With all cabling unplugged and the XPression system on a flat, non-slip surface, remove the two thumbscrews at the back of the system.



★ Set the two thumbscrews aside, as they will be needed to replace the top panel.

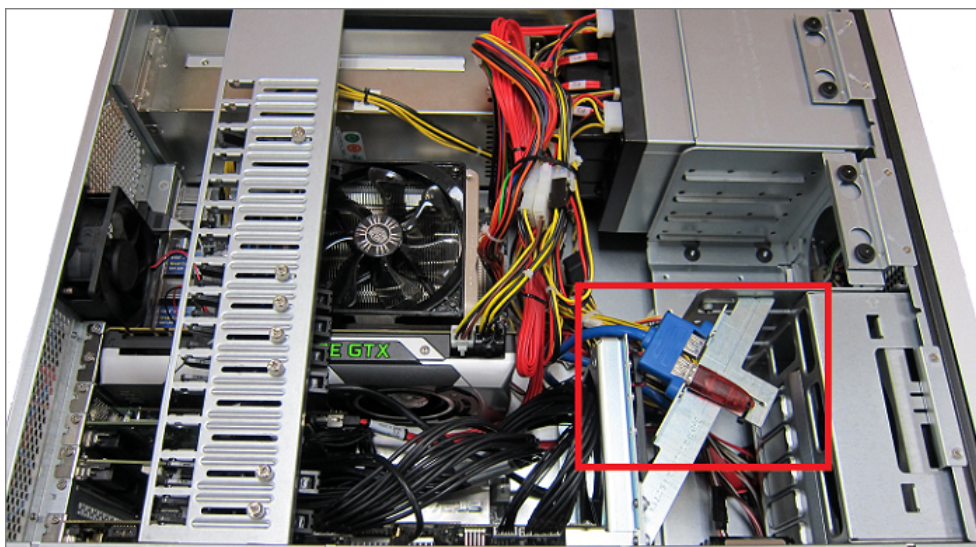
2. Gently pull the top panel back towards the rear of the unit, creating a gap between the top panel of the unit and the front of the chassis.



3. Lift the top panel off the chassis.

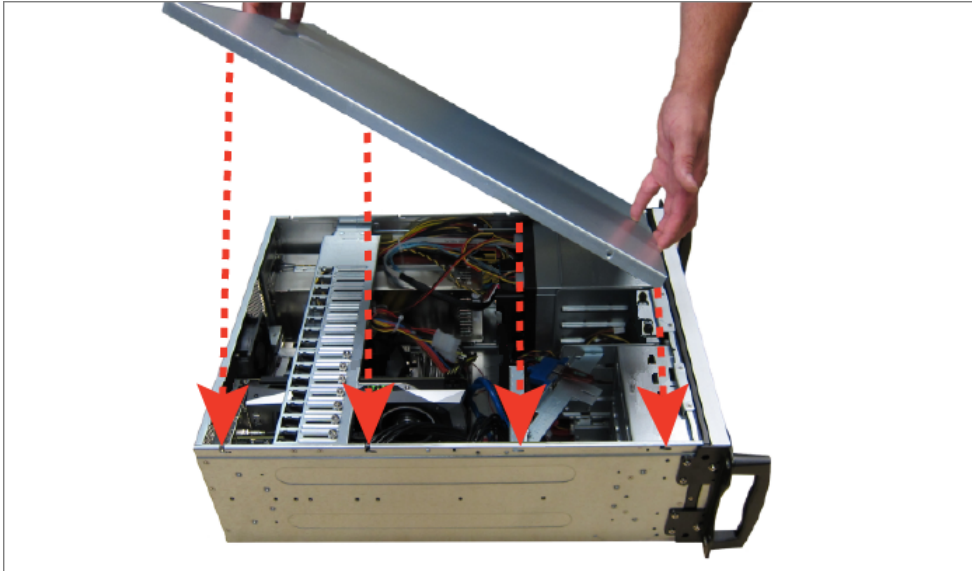


4. Insert the USB license dongle into the USB port beside the XPression dongle, shown in the image below.

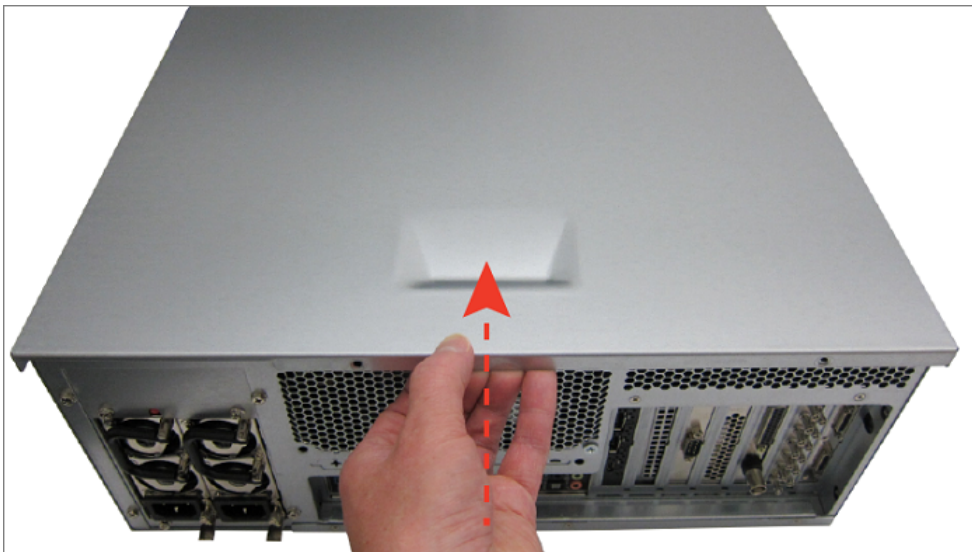


5. Replace the top panel of the XPression system as follows:

- Face the sides of the top panel down around the sides of the system.
- Line up the four nubs on the inside of the sides of the top panel with the L-shaped grooves on the sides of the system.



6. Gently slide the top panel into place, until a clicking noise is heard and the top panel is flush to the front top of the XPression system.



7. Insert and tighten the two thumbscrews into the back of the XPression system.

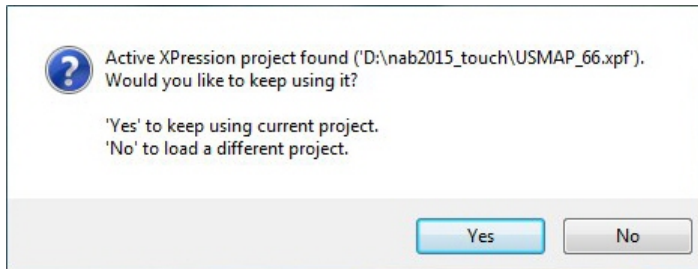


8. Reinstall your XPression system in the rack and reattach the cables.
9. Power up your XPression system.

To start XPression Touch Factory Designer:

1. Launch your XPression project.
2. Select the Touch Factory icon on the desktop or select it from the **Start** menu.

Touch Factory will detect the open XPression project and prompt you to continue using that project or load a new project.



XPression Project Loading Message

3. Select **Yes** to load the current project.

OR

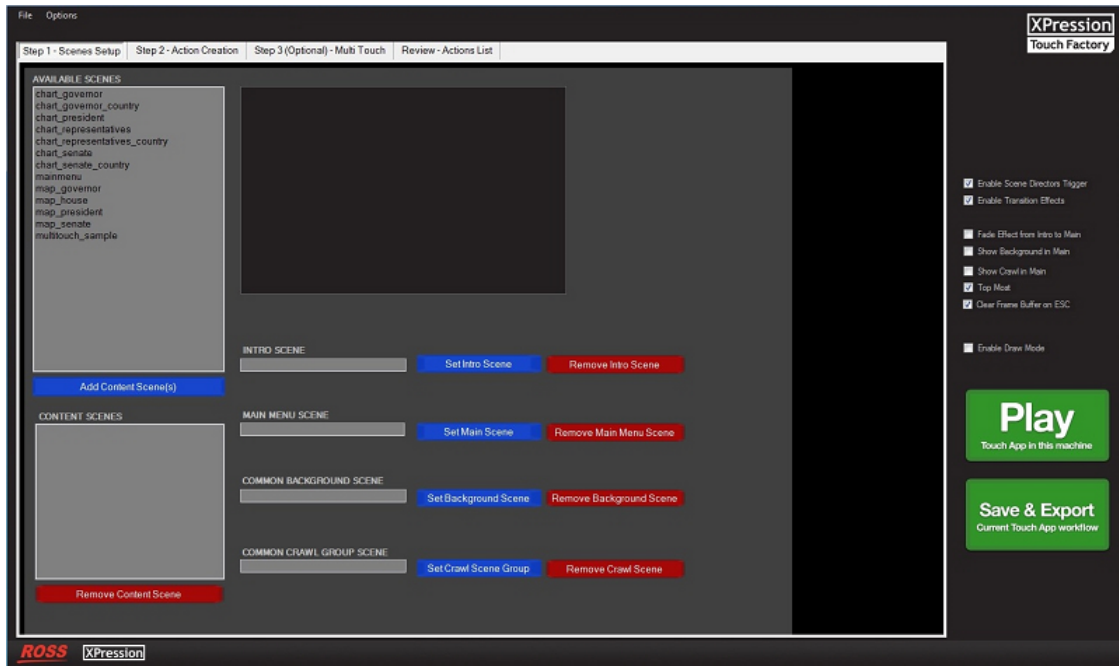
Select **No** to open the file browser window, navigate to a different project and select the XPression project file to open.

XPression will start loading the project. Loading times vary depending on the project size.

Once XPression finishes loading the project, the Touch Factory Designer interface opens. Touch Factory will start reading and processing the scenes and objects in the current project.

Once the project is loaded, you can begin building the touch workflow.

The Touch Factory Designer user interface is shown in the figure below.



Touch Factory Designer User Interface

Scenes and Actions Setup

This chapter covers the following topics:

[Prefixes and Definitions](#)  23

[Scenes Setup](#)  24

[Action Creation](#)  27

[Multi Touch \(Optional\)](#)  32

[Review Actions List](#)  34

Prefixes and Definitions

This section provides information on object prefixes, DataLinq keys, and output layer indexes. This information will help you to set up your project in XPression, so that it works correctly in Touch Factory.

Object Prefixes

When creating and naming objects in XPression, you need to include specific prefixes in order to be able to assign actions to those objects in Touch Factory:

- The `button_` prefix is used for identifying touchable objects.
- The `tg_` prefix is used for identifying objects that you want to be able to show/hide or fade in/fade out.
- The `tg_` prefix is also used on perspective camera objects that you set as target destinations (position and rotation) for creating the illusion that the main active camera is moving.
- The `multitouch_` prefix is used on any 3D object that can be manipulated with multi touch actions such as drag, rotate, and scale. If you have a group of 3D objects, give each object name a `multitouch_` prefix, rather than the group.

Default/Reserved DataLinq Keys

- The DataLinq key called `refererScene` is the default DataLinq key that you can set on all your Touch Factory scenes to store the source/referer SCENE name.

Create this DataLinq key on each scene and it will be automatically updated as soon as you call a touchable button that triggers a scene transition.

- The DataLinq Key called `refererButton` is the default DataLinq key that you can set on all your Touch Factory scenes to store the source/referer BUTTON name.

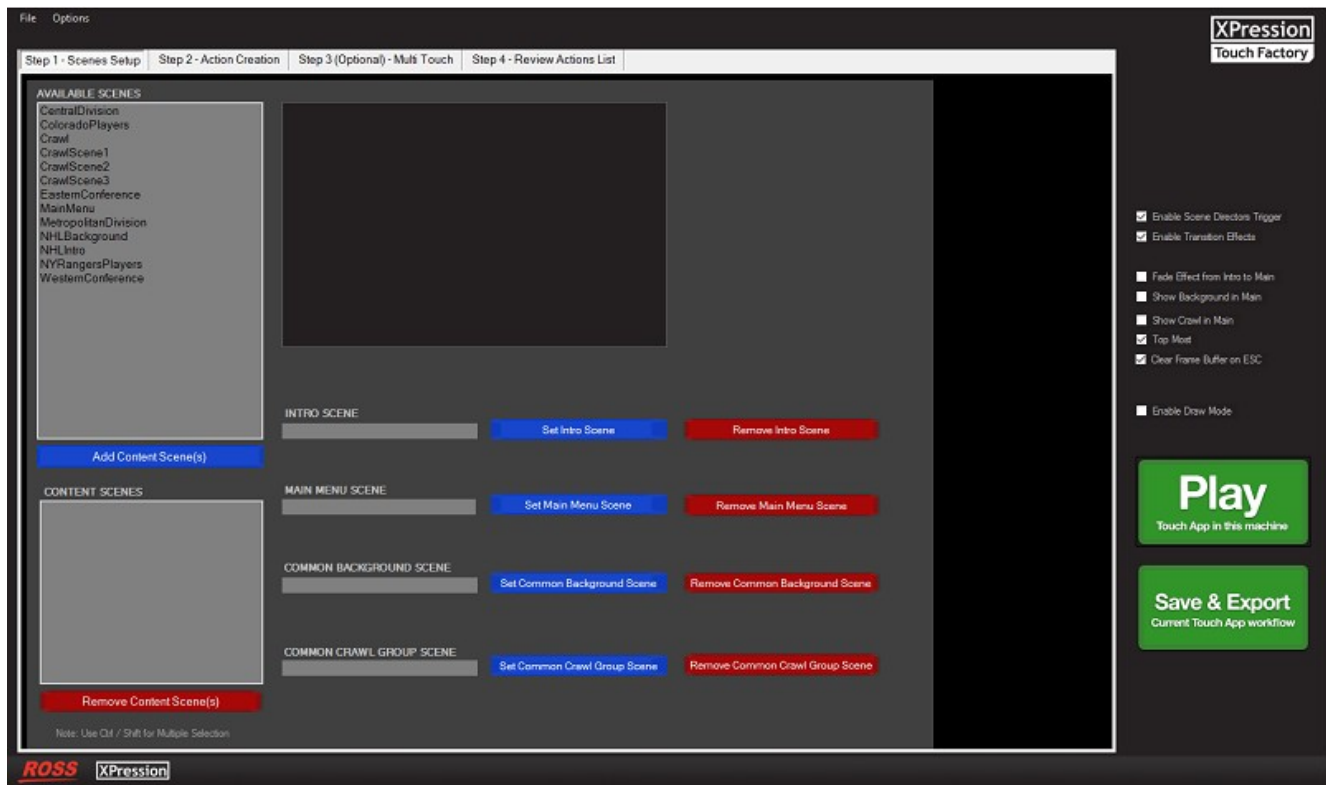
Create this DataLinq key on each scene and it will be automatically updated as soon as you call a touchable button that triggers a scene transition.

Output Layer Indexes

- Content scenes will be set online on layer 0 of the selected output framebuffer.
- The (optional) background scene will be set online on layer -3 of the selected output framebuffer.
- The (optional) crawl scene group will be set online on layer +3 of the selected output framebuffer.

Scenes Setup

In the **Step 1 - Scenes Setup** tab shown in the figure below, you can configure the scenes for the Touch workflow. The scenes in the project you launched are listed in the **AVAILABLE SCENES** list.



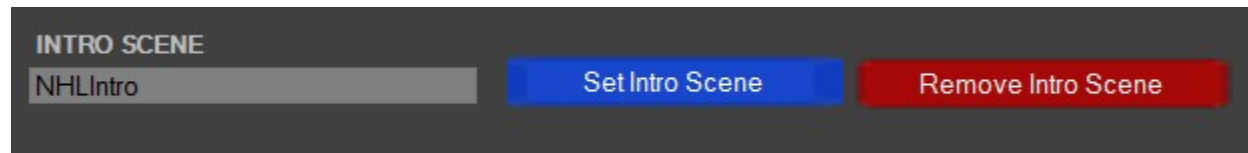
Step 1 - Scenes Setup Tab

To set up scenes:

1. In the **Step 1 - Scenes Setup** tab, from the **AVAILABLE SCENES** list, select the scene to be used as a non-interactive introductory animation or image before the **Main Menu Scene** and select the blue **Set Intro Scene** button.

This is an optional feature that is useful if you do not want to display the **Main Menu Scene** before you are ready to start controlling it.

The selected scene is removed from the **AVAILABLE SCENES** list and applied as the introductory scene for the workflow. It is displayed in the **INTRO SCENE** box, as shown in the figure below and also added to the **CONTENT SCENES** list.



INTRO SCENE Section

★ To remove the selected **Intro Scene**, select the red **Remove Intro Scene** button.

2. From the **AVAILABLE SCENES** list, select the scene you want to be the first interactive scene (the main scene) and select the blue **Set Main Scene** button.

If you haven't selected an **Intro Scene**, the **Main Menu Scene** is the first scene displayed when the Touch project is launched. This setting is required.

The selected scene is removed from the **AVAILABLE SCENES** list and applied as the **Main Menu Scene** for the workflow. It is displayed in the **Main Menu Scene** box, as shown in the figure below and also added to the **CONTENT SCENES** list.



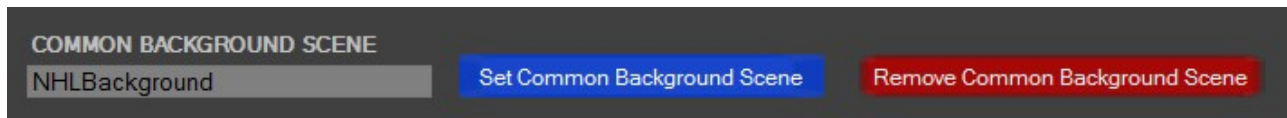
MAIN MENU SCENE Section

★ To remove the **Main Menu Scene**, select the red **Remove Main Menu Scene** button.

- From the **AVAILABLE SCENES** list, select the scene you want to use as the background layer and select **Set Background Scene**.

Setting a background scene is optional.

The selected scene is removed from the **AVAILABLE SCENES** list and applied as the **Common Background Scene** for the workflow. It is displayed in the **COMMON BACKGROUND SCENE** box, as shown in the figure below. Since there is no touch-sensitive content on a background scene, this scene is not added to the **CONTENT SCENES** list.



COMMON BACKGROUND SCENE Section

★ To remove the **Common Background Scene**, select the scene and select the red **Remove Common Background Scene** button.

- From the **AVAILABLE SCENES** list, select the scene you want to use as the common crawl layer and select the blue **Set Crawl Scene Group** button.

This is a scene group to which you have assigned the **Crawl** effect in XPression. For information on assigning effects to scenes, see the *XPression User Guide*.

This feature is optional.

The selected scene is removed from the **AVAILABLE SCENES** list and applied as the **Common Crawl Group Scene** for the workflow. It is displayed in the **COMMON CRAWL GROUP SCENE** box, as shown in the figure below. Since there is no touch-sensitive content on a crawl scene, this scene is not added to the **CONTENT SCENES** list.

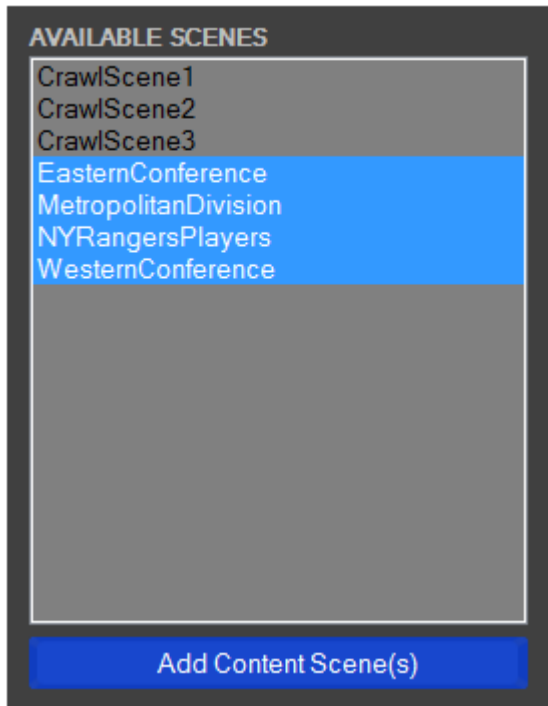


COMMON CRAWL GROUP SCENE Section

★ To remove the common crawl group scene, select the scene and select the red **Remove Common Crawl Group Scene** button.

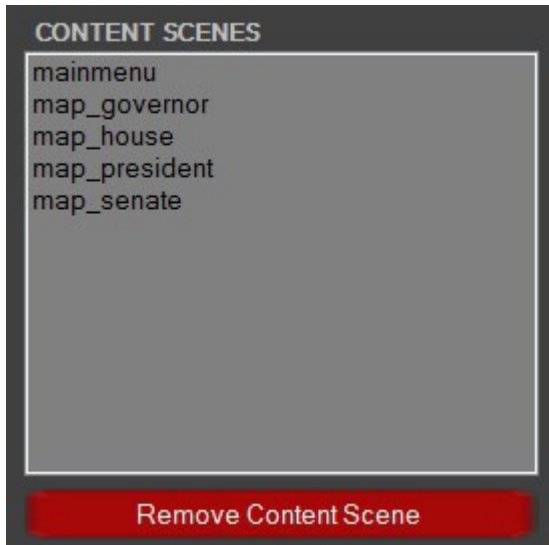
- From the **AVAILABLE SCENES** list, select the scenes that can be interacted with and have transitions performed between them and select the blue **Add Content Scene(s)** button.

6. Press **Ctrl** or **Shift** while selecting a scene to select multiple scenes.



Add Content Scenes

The selected scenes are added to the **CONTENT SCENES** list.

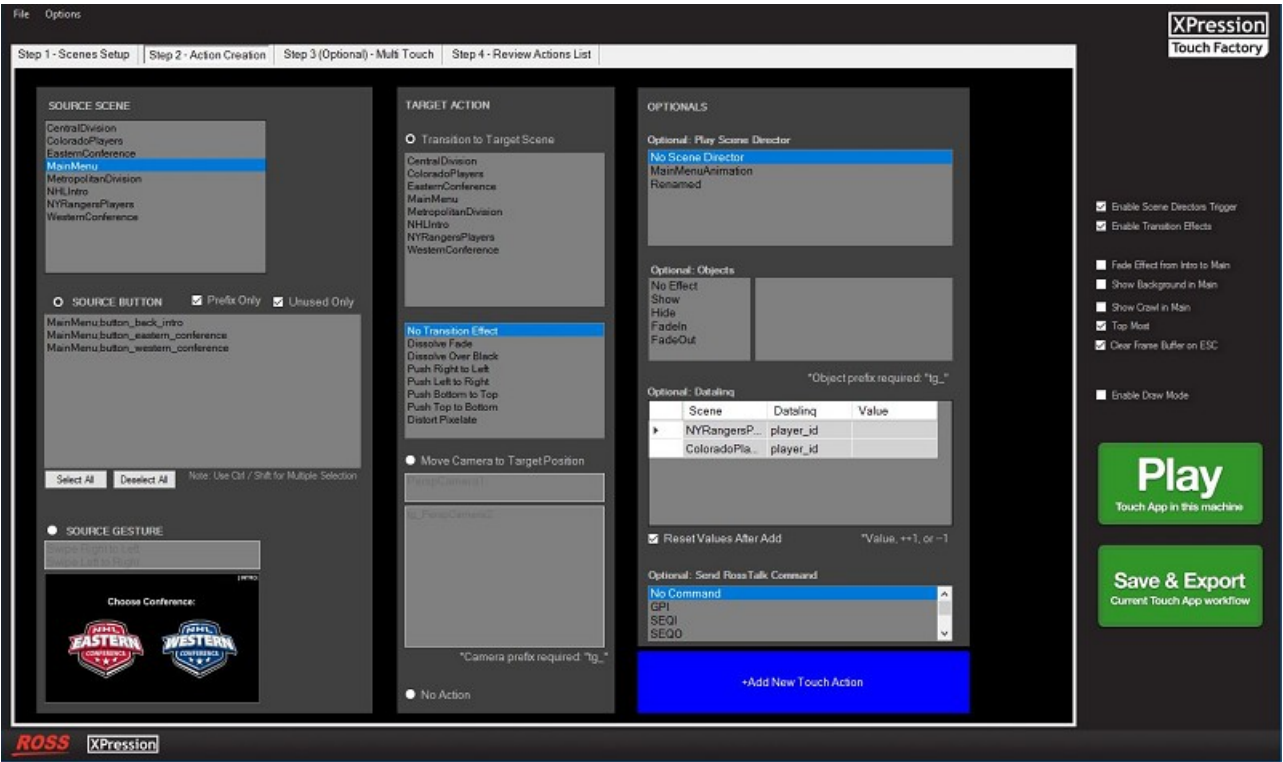


CONTENT SCENES List

★ To remove a scene from the **CONTENT SCENES** list, select the scene and select the red **Remove Content Scene** button.

Action Creation

In the **Step 2 - Action Creation** tab shown below, you can create the interactive actions for the Touch workflow.



Step 2 - Action Creation Tab

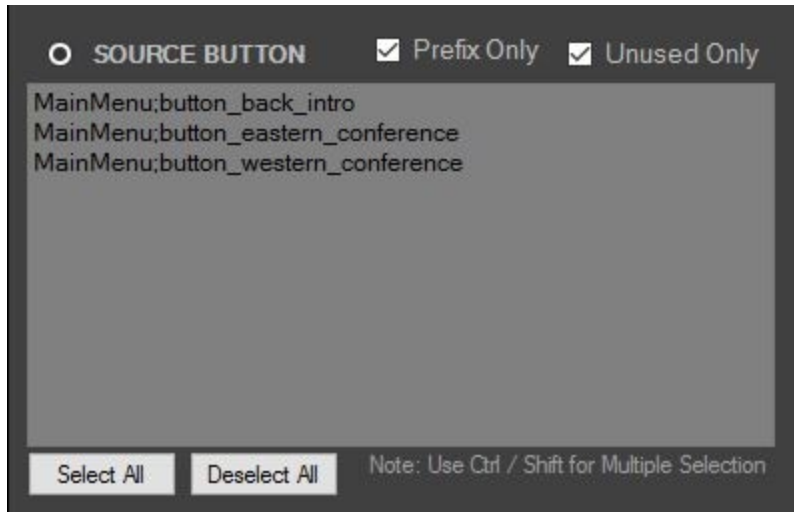
In this section, you define which elements (or gestures) from a scene will be touch triggers and what you want to happen when the element is triggered. The scenes that were defined as **Content Scenes** in the **Scene Setup** tab, appear in the upper left corner of the **Action Creation** tab in the **Source Scene** list.

To create a touch action:

1. In the **Step 2 - Action Creation** tab, from the **SOURCE SCENE** list, select the scene in which you want to create a touchable button.

The available touchable elements in the selected scene are listed in the **SOURCE BUTTON** list.

Only elements that include the “**button_**” prefix and are not already in use, can be used to create an action. These elements are listed by default. To see every element in the selected scene, clear the **Unused Only** and **Prefix only** checkboxes below the **SOURCE BUTTON** list.



SOURCE BUTTON List

2. From the **SOURCE BUTTON** list, select an element to use as a touchable button.

OR

3. From the **SOURCE GESTURE** list, select a gesture to use for the scene.



SOURCE GESTURE List

- Select **Swipe Right to Left** to use a right to left finger swipe on the touch display.
- Select **Swipe Left to Right** to use a left to right finger swipe on the touch display.

3. From the **TARGET ACTION** section, select the action to trigger when the source button is touched or the source gesture is executed.

There are three mutually-exclusive actions from which to choose:

- Transition to Target Scene
- Move Camera to Target Position
- No Action

These actions are described in the following table.

Action	Description
Transition to Target Scene	Triggers a transition from the selected source scene to the target scene selected in the Transition to Target Scene list. When this action is selected, a list of transition effects is displayed in the next pane. You can select one of the following effects from the Transition Effect list: • No Transition Effect • Dissolve Fade • Dissolve Over Black • Push Right To Left • Push Left To Right • Push Bottom To Top • Push Top To Bottom • Distort Pixelate You can also add a scene director action that will be executed prior to the transition action. Optionally, you can have no target action and just play the scene director. You can also add a scene director action that will be executed prior to the transition action.
Move Camera to Target Position	Automatically animates the current active Perspective Camera Object (in XPression), moving and rotating it from the current position/rotation to a target position/rotation defined by another inactive perspective camera object available in the scene. Camera objects are identified by the prefix "tg_" in their name.
No Action	Triggers other optional actions without triggering a transition or camera animation.

4. Select one of the following optional actions as the touch trigger:

Action	Description
Play Scene Director	Play Scene Director – play the selected Scene Director animation from the source scene as soon as the source button or source gesture is triggered. If the selected target action is Transition to Target Scene, the Scene Director will play first and the corresponding transition is executed as soon as the animation ends. To play both a transition and a scene director action: 1. From the SOURCE BUTTON list, select the source button for the object. 2. In the TARGET ACTION section, select the target scene and the transition effect you want. If you select No Action, only the Scene Director animation is played. 3. In the OPTIONALS section, in the Optional: Play Scene Director section, select the scene director animation you want to play. 4. Then go to Step 5.
Objects	Determines the visibility of a specific object from the source scene, as follows: • No Effect – applies no effect to the selected object • Show – turns on the visibility of the selected object, setting its alpha value to 100% • Hide – turns off the visibility of the selected object, setting its alpha value to 0% • FadeIn – shows the selected object with a fade in animation • FadeOut – hides the selected object with a fade out animation In XPression, give the object a tg_ prefix and create a source button (with a button_ prefix) on top of the object. To assign a visibility effect to an object: 1. From the SOURCE BUTTON list, select the source button for the object. 2. In the TARGET ACTION section, select No Action. 3. In the Optional: Objects section, from the left side, select the visibility effect you want. 4. In the Optional: Objects section, from the right side, select the object with the tg_ prefix. 5. Then go to Step 5.

Action	Description
DataLinq	For the selected DataLinq source button, enter one of the following values: • ++1: Incremental value. Reads the current dataLinq key value and, if it is a number, increases it by 1. • --1: Decremental value. Reads the current dataLinq key value and, if it is a number, decreases it by 1. To automatically clear the entry in the Value column after adding a new action, select the Reset values after Add checkbox.
Send RossTalk Command	Automatically sends a RossTalk protocol command message from the current XPression machine to another Ross machine that supports RossTalk protocol. This can be useful to trigger AR elements to UX virtual graphics or graphics from another XPression machine.

5. Select the blue **+Add New Touch Action** button to create the touch action.

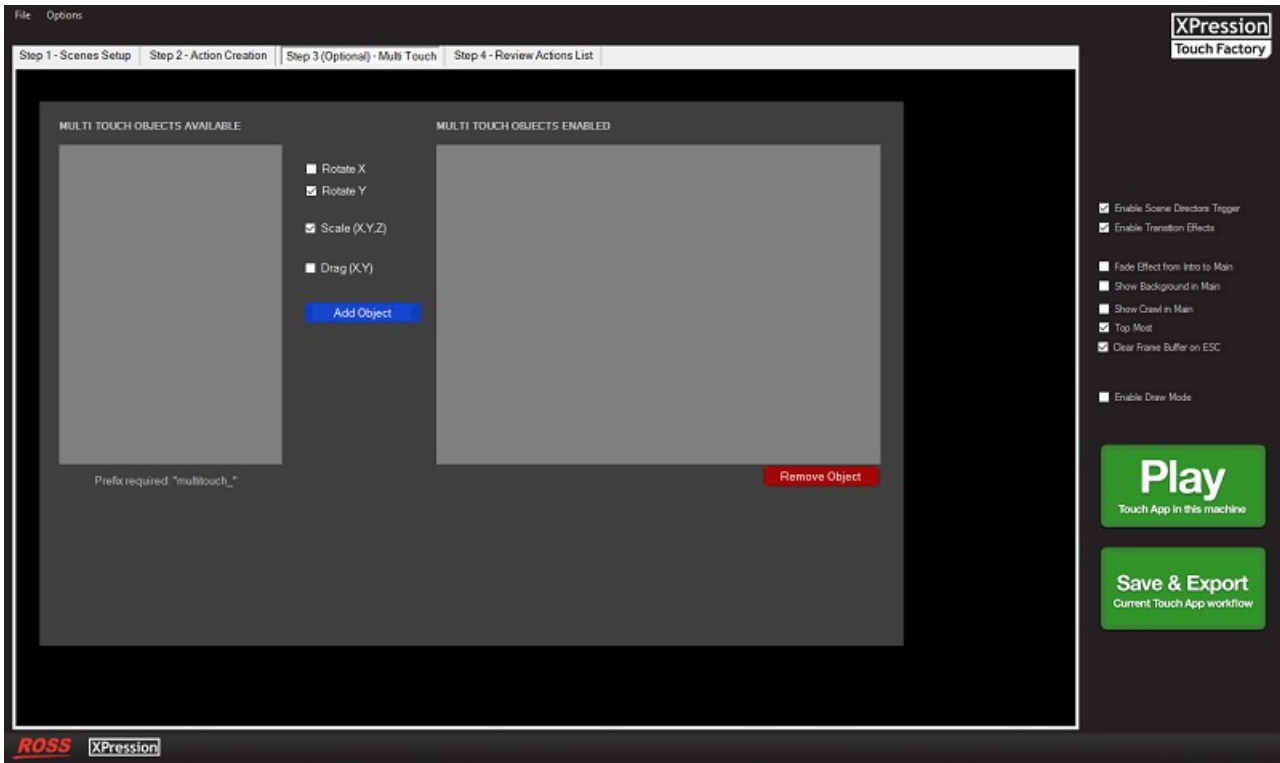
The touch action is added to the **BUTTON ACTIONS LIST** in the **Review - Actions List** tab.

If you change your mind about the target action you assigned to the button or gesture, go to the **Review - Actions List** tab and remove the action from the relevant list.

Multi Touch (Optional)

In the **Step 3 (Optional) - Multi Touch** tab shown below, you can add multi touch actions to selected 3D objects.

Touch Factory lists the 3D objects from the current project that include the “**multitouch_**” prefix in their name.



Step 3 (Optional) - Multi Touch Tab

To enable multi touch action for an object:

1. In the **Step 3 (Optional) - Multi Touch** tab, in the **MULTI TOUCH OBJECTS AVAILABLE** list, select the 3D object(s) you want to enable.
2. Select a multi touch action to enable it for the selected 3D object.

The options are as follows:

- **Rotate X** – detects the position of one finger on top of the object and rotates the object along the X axis.
- **Rotate Y** – detects the position of one finger on top of the object and rotates the object along the Y axis.
- **Scale (X, Y, Z)** – detects the position of two fingers over the object and scales it proportionally along the X axis, Y axis, and Z axis depending on the distance between the two fingers.
- **Drag (X,Y)** – detects the position of one finger over the object and moves the object vertically and horizontally along the X axis and Y axis.

★ **Rotate** and **Drag** multi touch actions cannot be enabled simultaneously for the same object.

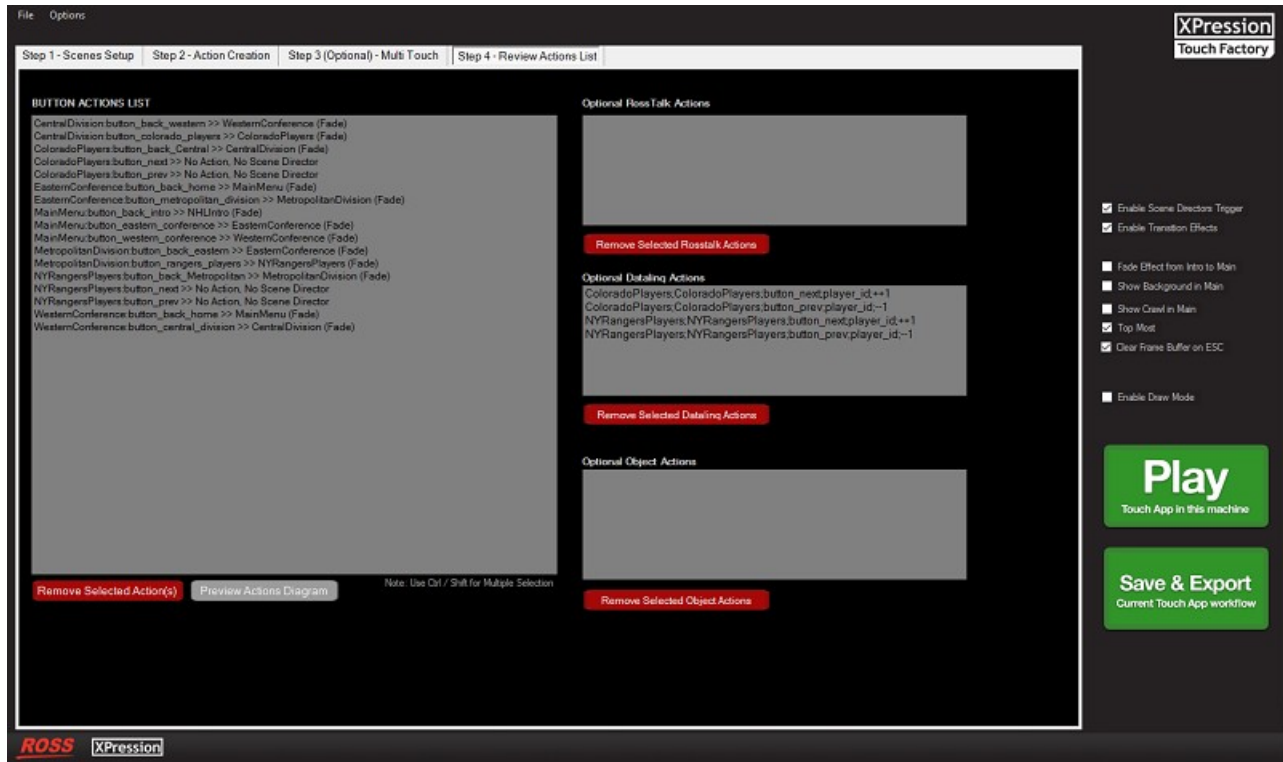
3. Select the blue **Add Object** button to enable the multi touch object.

The 3D objects that have been assigned multi touch behaviors will be listed in the **MULTI TOUCH OBJECTS ENABLED** list.

★ To remove a multi touch object, select the object from the **MULTI TOUCH OBJECTS ENABLED** list and select the red **Remove Object** button.

Review Actions List

In the **Review - Actions List** tab shown in the figure below, you can review the touch actions you created for your project and remove any actions that you decide you don't want or want to change. You can also see a workflow diagram for each scene that contains touchable elements.



Step 4 - Review-Actions List Tab

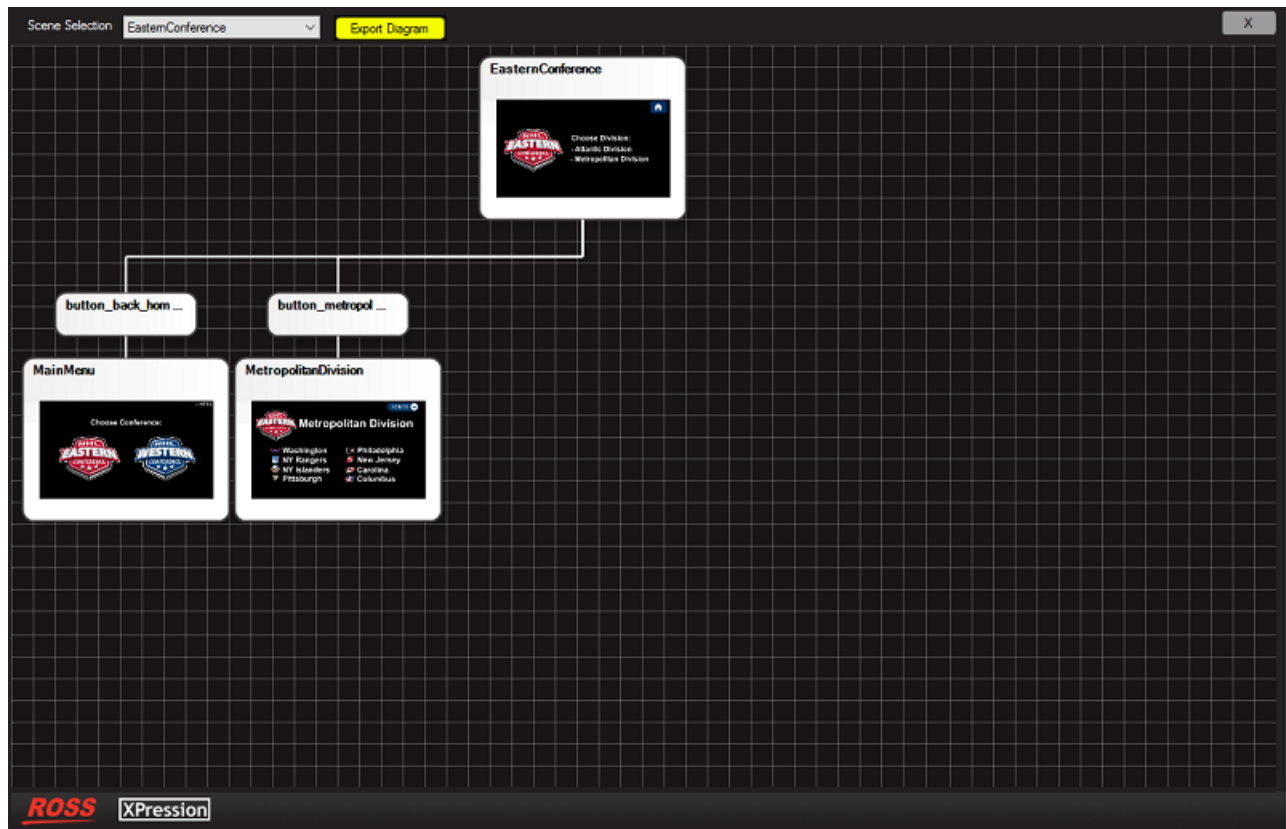
To delete a touch action:

1. In the **Review - Actions List** tab, from any of the action lists, select the touch action you want to delete.
2. Select the red **Remove Selected Action(s)** button beneath the list.

To view a workflow diagram:

1. Below the **BUTTON ACTIONS LIST**, select the gray **Preview Actions Diagram** button.
2. From the **Scene** drop-down list, select the scene for which you want to view the workflow diagram.

The workflow diagram for the selected scene is generated, showing the source scene, corresponding target scenes, and the button objects that trigger the actions.



Workflow Diagram

3. To close the workflow diagram and return to the **Review-Actions List** tab, select the **X** in the top right corner.

To export the workflow diagram:

1. Select the yellow **Export Diagram** button.
2. In the **Save As** dialog, navigate to the folder in which you want to save the workflow diagram.
3. In the **File name** field, enter a name for the diagram and then select **Save**.

The workflow diagram is saved as a JPEG image file in the selected folder.

Operation

This chapter covers the following topics:

[Saving and Loading Files](#)  37

[Viewing the Console Window](#)  39

[Playing a Touch Workflow](#)  40

[Additional Play Settings](#)  41

[Making Changes to Your XPression Project](#)  43

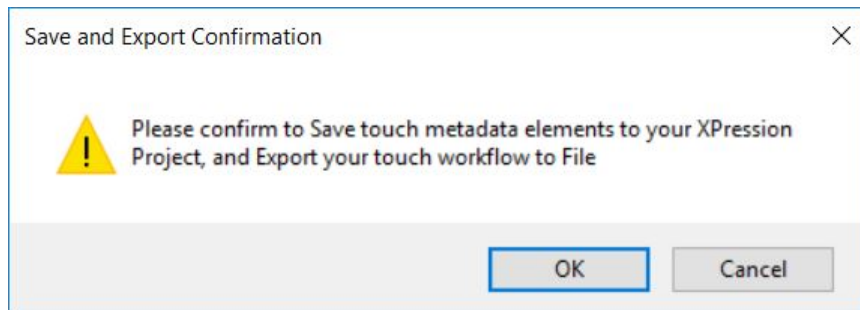
Saving and Loading Files

The current Touch Factory workflow configuration can be saved to a Touch Factory Setup File (extension .tsf). Additional metadata elements will be added to the XPression project. Saving a Touch Factory workflow to file is required to load it at a later time on the machine as well as on other remote machines with [Touch Factory Player](#) .

To save a file:

1. In the **Touch Factory Designer Menu** bar, select **File > Save** workflow/configuration file or select the green **Save & Export Current Touch App** workflow button.

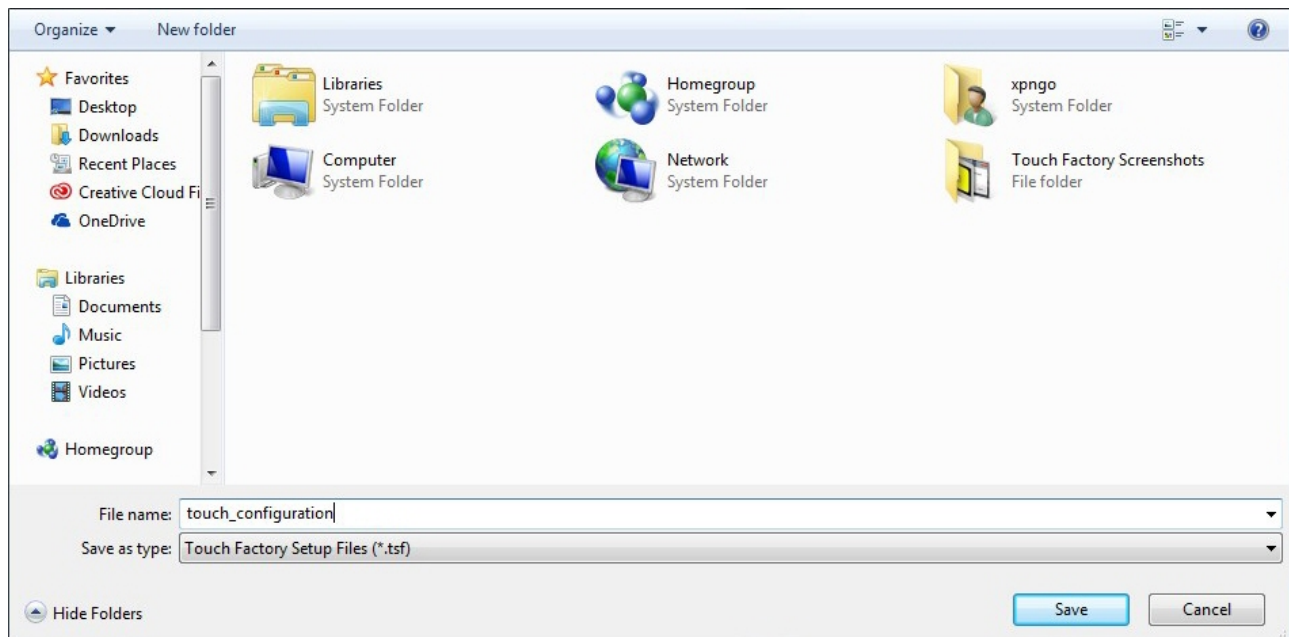
The **Save and Export Confirmation** window opens.



Save and Export Confirmation Dialog

2. Select **OK**.

The confirmation window closes and the **Save As file** browser opens.



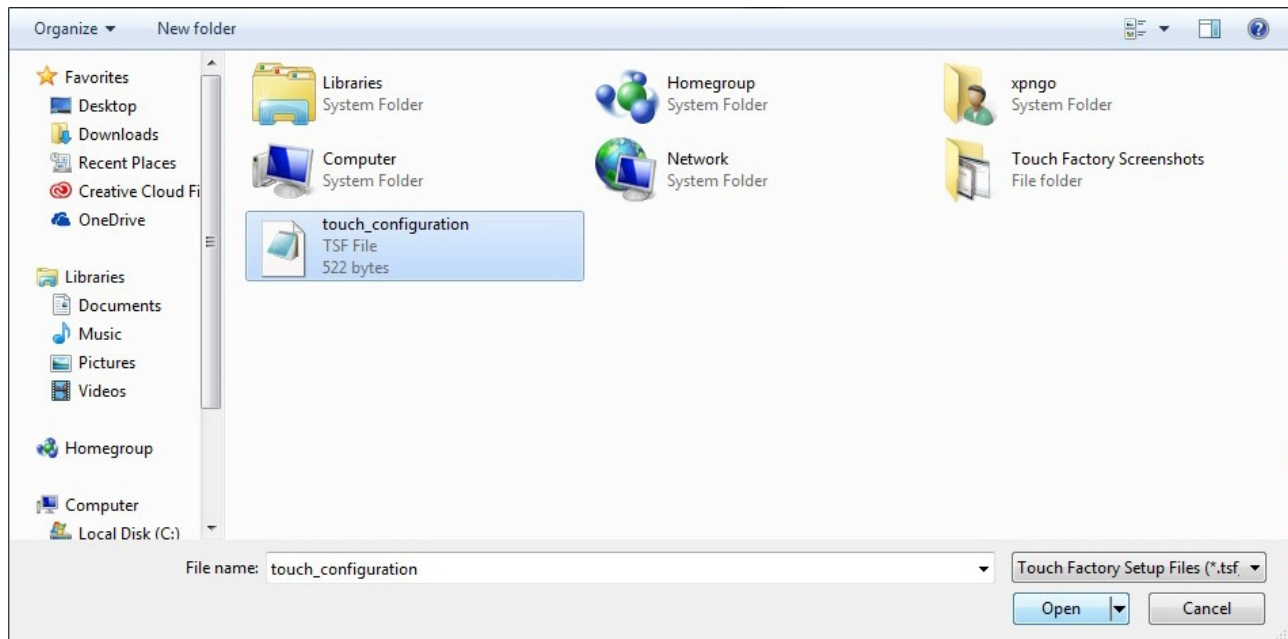
Save As Dialog

3. Select a location in which to save the workflow configuration file and select **Save**.

To load a file:

1. In the **Touch Factory Designer Menu** bar, select **File > Load workflow/configuration** file.

The **Open file** browser opens.



Open File Browser

2. Locate and select the workflow configuration file to load and select **Open**.

The workflow is loaded in the **Touch Factory Designer**.

Viewing the Console Window

Use the **Touch Factory - Console Window** to test and debug a project while creating a new workflow. The **Console Window** displays the X and Y coordinates of touch display or mouse click events, the names of the corresponding objects being touched, and the actions being triggered.

```
Touch Factory Current Directory: C:\XPressionApps\Touch Factory
Minimun Distance for Drawing:32
Draw Timer Interval:50
Minimun Distance for Multitouch:15
Minimun Distance for 2 Fingers:20
Multitouch Sensitivity for Rotation:0.5
Multitouch Sensitivity for Drag:1
Multitouch Sensitivity for Scale:0.002
Client PC Image Size: 384x216 (disabled)
Tablet Image Size: 384x216 (disabled)
Settings loaded.
Device 0 opened, name is ROCKEY6 SMART 0

***** Get hardware information
FactoryTime:53AE0FD5
HardSerial 00000000
ShipTime   :53AE0FD5
COS Version:30323036
Valid FULL DEMO License!
S/N 00000000000000000000000000000000
S/N 00000000000000000000000000000000
SW Key Folder not found
SW Key Touch-Remote: False
Creating temporary Pen Toggle scene...
```

Console Window

To open the console window:

- In the **Menu** bar, select **Options > Show Console**. When selected, a check mark will be displayed next to the option in the menu.

Playing a Touch Workflow

Additional applications or machines are not needed to play a Touch Factory project workflow. After creating or loading touch actions, you can play the project on the current machine.

To play the Touch project:

- Select the green **Play** button in the **Touch Factory Designer** window.

To stop playing the Touch project:

- Press the **Esc** key.

Additional Play Settings

Some functions can be enabled/disabled when playing the Touch project. These additional play settings are located on the right side of the **Touch Factory Designer** window, above the green buttons.

Scene Directors and Transitions

Enable Scene Directors Triggers – Select this checkbox to play the optional **Scene Director** animation triggers.

Enable Transition Effects – Select this checkbox to play transition effects while performing transitions from one scene to another.

Miscellaneous Settings

- **Fade Effect from Intro to Main** – Select this checkbox to use a **Dissolve Fade** effect as the transition between the **Intro Scene** and **Main Scene**.

If an **Intro Scene** has been set, selecting this checkbox will trigger the transition between the **Intro Scene** and the **Main Menu Scene** as soon as the user touches any part of the touch display. You don't need to create a button to transition from the **Intro Scene** to the **Main Menu Scene**.

- **Show Background in Main** – Select this checkbox to display the **Common Background** as a background layer (Layer -3) while the **Main Menu Scene** is online (Layer 0).

By default, the **Common Background** is not shown while the **Main Menu Scene** is online.

- **Show Crawl in Main** – Select this checkbox to display the **Common Crawl** scene group (Layer +3) while the **Main Menu Scene** is online (Layer 0).

By default, the **Common Crawl** group scene is not shown while the **Main Menu Scene** is online.

- **Top Most** – Select this checkbox to display the **Touch Factory Designer** on top of other application windows that are running on the XPression machine.

- **Clear Frame Buffer on ESC** – Select this checkbox to clear the current output framebuffer when the Touch project is stopped (by pressing the **Esc** key).

By default, this checkbox is enabled.

Draw Mode / Highlighter

Enable Draw Mode – Select this checkbox to use the touch highlighter functionality when playing the Touch project. Select the checkbox before selecting **Play**.

When **Draw Mode** is enabled, there will be a pen image in the lower-left corner of the screen as an overlay on top of the XPression output. Select the pen image to activate it and use the highlighter to draw freehand yellow curved lines on top of the graphics.



Draw Mode Enabled

Select the pen image again to deactivate it and remove the lines that were drawn. When **Draw Mode** is deactivated the pen image is visible, but grayed out.



Draw Mode Deactivated

The talent can turn the highlighter on or off while online. When the highlighter is activated, no other touch actions are executable.

Making Changes to Your XPression Project

When you have a project open in both XPression and Touch Factory, changes you make in XPression to any scene or object are automatically saved in Touch Factory. You can review your changes by playing the touch project.

If you create a new scene or object, you need to close and reopen Touch Factory and load the updated project. You will then need to go through the [Scenes Setup](#)  and [Action Creation](#)  procedures again.

Remote Configuration

When the Touch Display cannot be connected directly to the XPression machine, Touch Factory can be used remotely.

★ Remote control of Touch Factory is a separate, purchasable option. Contact your Ross Video salesperson for details about purchasing the remote client application option for Touch Factory.

This chapter covers the following topics:

[Touch Factory Client Setup](#)  45

[Touch Factory Setup](#)  48

[Client Configuration](#)  49

[Running the Touch Factory Client](#)  50

Touch Factory Client Setup

Touch Factory can be controlled remotely via a computer (Ethernet) or tablet (Wi-Fi).

Hardware Setup

If using an Ethernet connection to a computer, use the following procedure to connect the Touch Factory hardware for use with the client computer.

To set up the client hardware:

1. Connect port one of the touch display to the client computer display output.
2. Connect port two of the touch display to the XPression output signal.

This might require an SDI to HDMI converter.

3. Connect the touch display USB port to the client computer.

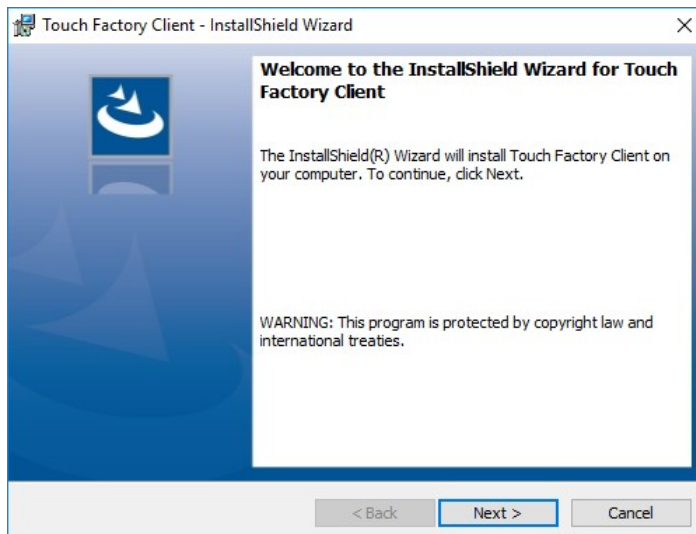
Software Setup

1. Install the Touch Factory Client software on the remote computer that has the touch display connected.
2. By default, the Touch Factory Client is installed in the **C:\XPressionApps\Touch Factory Client** folder, and creates a Touch Factory Client icon on the desktop and a Touch Factory folder in the **Start** menu.

To install Touch Factory Client:

1. Launch the **Touch Factory Client** file.

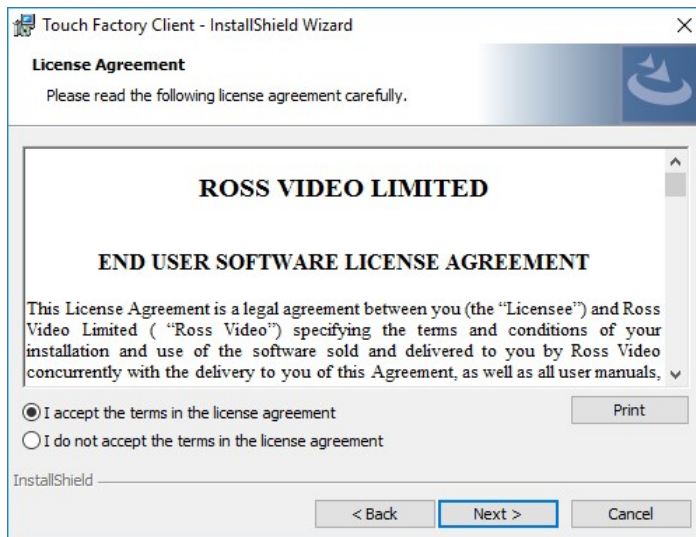
The **Touch Factory Client - InstallShield Wizard** opens.



Touch Factory Client - InstallShield Wizard

2. Select **Next**.

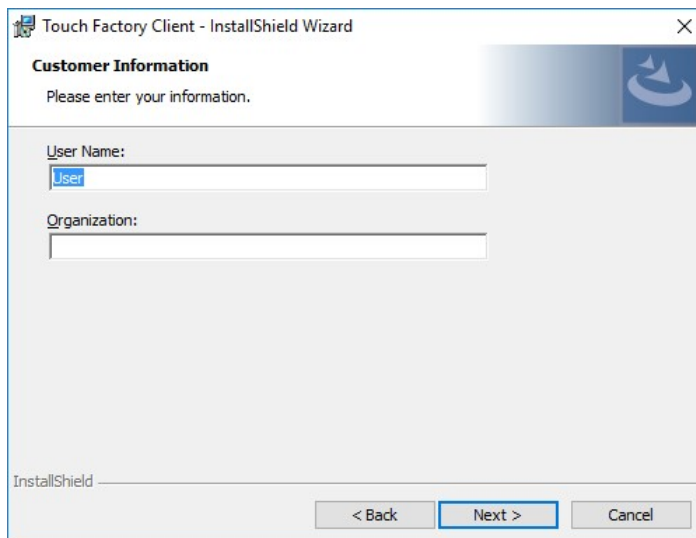
The **License Agreement** dialog opens.



License Agreement

3. Select the **I accept the terms in the license agreement** radio button and select **Next**.

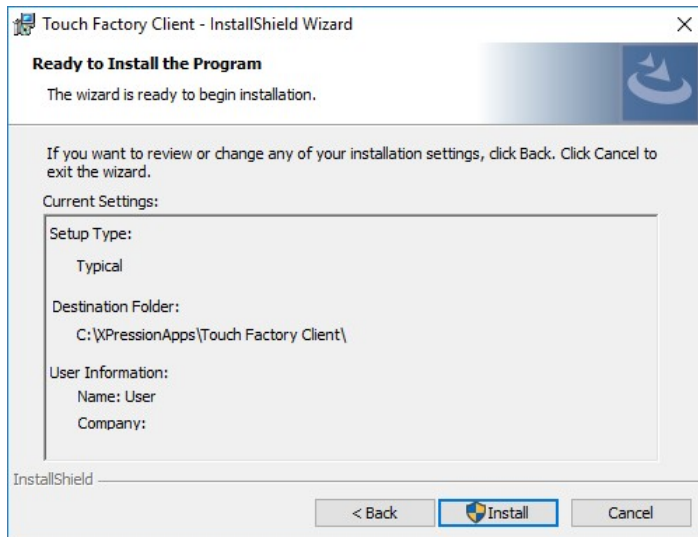
The **Customer Information** dialog opens.



Customer Information

4. Enter a user name in the **User Name** box and the name of your organization in the **Organization** box and select **Next**.

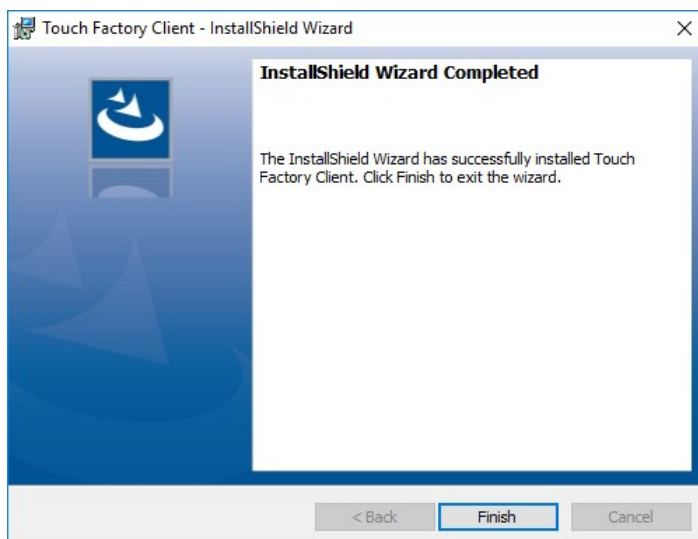
The **Ready to Install the Program** dialog opens.



Ready to Install the Program

5. Select **Install**.

The **InstallShield Wizard Completed** dialog opens.



InstallShield Wizard Completed

6. Select **Finish**.

Touch Factory Setup

To use Touch Factory remotely, the network and client settings need to be configured in the Touch Factory Settings. See [Network Settings](#)^[13] and [Client Settings](#)^[14] for configuration details.

If you are using the Touch Factory software on your own equipment, you may need to add an exception to your firewall settings to allow communication with the Client application.

To change allowed apps:

1. Select **Start** and enter the word “**firewall**”.
2. From the list that appears, select **Windows Firewall** (not Windows Firewall with Advanced Security).
3. From the list of settings on the left side of the Windows Firewall screen, select **Allow an app or feature through Windows Firewall**.
4. Select **Allow another app...** beneath the bottom-right corner of the list of Allowed apps and features.
If the **Allowed apps and features** button is not enabled, select **Change Settings** and give yourself permission to make changes or add new apps.
5. Browse to and select the **Touch Factory Client** application.
6. Select the **Network Types** button to specify whether to allow access on public or private networks (or both).
7. Then select **Add**.

Client Configuration

The Touch Factory Client configuration file can be edited directly.

To edit the Touch Factory Client configuration file:

1. Open the **tfclient.cfg** configuration file located in the Touch Factory Client folder (**C:\XPressionApps\Touch Factory Client**).

The following text displays the configuration file structure with sample initial data:

```
<?xml version= "1.0" encoding="utf-8"?>
<touch_factory>
  <xpression port="9091" ip="127.0.0.1" image_port="9997" />
  <click_mode>2</click_mode>
</touch_factory>
```

2. Replace the **ip** value with the IP address of the XPression machine and, if necessary, change the **xpression port** value from **9091** to the number of the port used on the Touch Factory side.
3. Update the **image_port** value to match the configuration on the Touch Factory side, if necessary.
4. Edit the **click_mode** value.

The **click_mode** parameter defines whether the Touch Actions from the touch display will be detected as **Mouse** mode (1) or as **Touch** mode (2). The default is **Touch** mode (2).

Standard touchscreens support both **Touch** mode and **Mouse** mode.

Some older touchscreens support **Mouse** mode only. If **Touch** mode is selected for a touchscreen that only supports **Mouse** mode, the user input won't be detected at all.

In some cases, using a KVM (keyboard, video and mouse) switch may disable Touch mode.

For assistance in determining the appropriate mode selection, contact [Ross Technical Support](#).

5. Once the configuration is complete, save the updated configuration file.

Running the Touch Factory Client

Touch Factory Client will detect local touch events and forward them to the remote XPression machine. You can check the Console Window to see if touch events are being received on the Touch Factory server side.

If the client applications have not been enabled in the Touch Factory settings, a full screen XPression Touch Factory logo will be displayed on the Touch Factory Client application display:



Client Applications Not Enabled

If the client applications are enabled in the Touch Factory settings, a preview image of the XPression output framebuffer will be streamed through the network and displayed on the Touch Factory Client application display.

To run the Touch Factory Client:

- After configuring the Touch Factory Client, double-click the Touch Factory Client desktop icon on the client application.
 - ★ Launch the Touch Factory Client first and then launch Touch Factory to stream the XPression output framebuffer frames to the Touch Factory Client application through the network. This feature will not work if the virtual output is being used as the XPression output framebuffer.

To close the Touch Factory Client:

- Press **Esc**.

Touch Factory Player

Touch Factory Player is designed to run Touch Factory projects in an automated configuration.

Touch Factory Player will run in the background on the corresponding XPression machine. It is populated with a list of preconfigured Touch Factory projects that are automatically enabled as soon as the corresponding XPression projects are loaded and its scenes are set online.

Touch Factory Player can be very useful for using Touch Factory projects in News rooms / MOS workflows, where projects and scenes are loaded and set online from a sequencer and third party applications.

The XPression user interface is not required, so Touch Factory Player can run seamlessly in an XPression Bluebox system.

A Touch Factory (Designer) license dongle or a specific Touch Factory Player dongle is required to run the application.

Touch Factory Player is designed to run with XPression 6.5.3600 or later.

This chapter covers the following topics:

[Installing Touch Factory Player](#)  52

[Configuring Touch Factory Player](#)  55

[Starting Touch Factory Player in Server Mode](#)  69

[Starting Touch Factory Player in Standalone Mode](#)  70

[Closing Touch Factory Player](#)  71

[Keyboard Shortcuts for Running Touch Factory Player in Standalone Mode](#)  72

Installing Touch Factory Player

This section of the user guide describes how to install Touch Factory Player.

To install Touch Factory Player:

1. Double-click the **Touch Factory Player.exe** file.

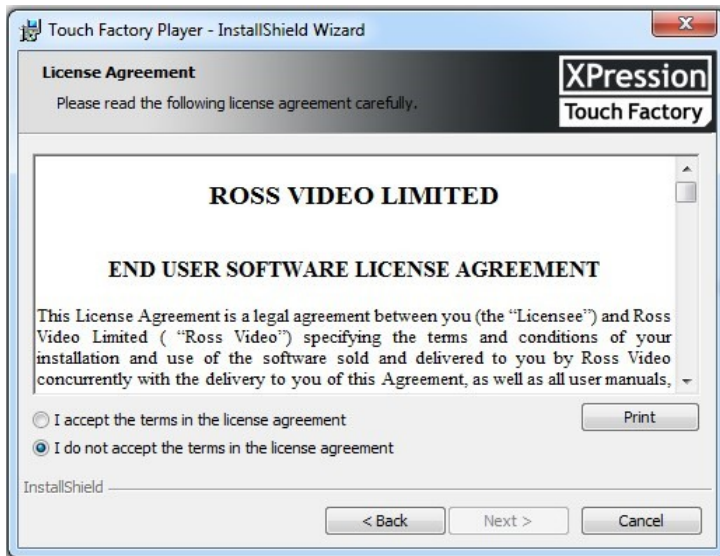
The **Welcome** screen for the installation wizard opens.



Touch Factory Player Installation - Welcome

2. Select **Next**.

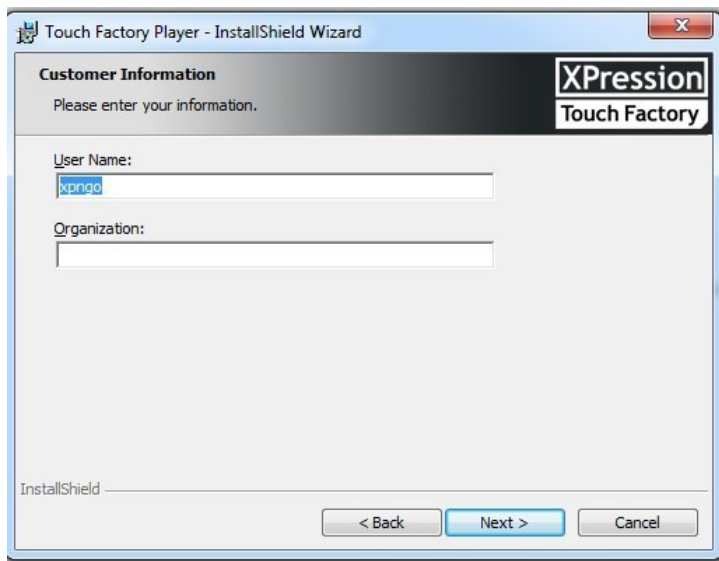
The **License Agreement** page opens.



Touch Factory Installation - License Agreement

3. Select **I accept the terms of the license agreement** and select **Next**.

The **Customer Information** page opens.



The screenshot shows the 'Customer Information' page of the 'Touch Factory Player - InstallShield Wizard'. The window title is 'Touch Factory Player - InstallShield Wizard'. The page has a dark header with the 'XPression Touch Factory' logo. Below the header, it says 'Please enter your information.' There are two text input fields: 'User Name:' with the value 'xpnqo' and 'Organization:' which is empty. At the bottom, there are three buttons: '< Back', 'Next >', and 'Cancel'. The 'Next >' button is highlighted in blue.

Touch Factory Installation - Customer Information

4. Enter your **Username** and **Organization** and select **Next**.

The **Ready to Install the Program** page opens.



The screenshot shows the 'Ready to Install the Program' page of the 'Touch Factory Player - InstallShield Wizard'. The window title is 'Touch Factory Player - InstallShield Wizard'. The page has a dark header with the 'XPression Touch Factory' logo. Below the header, it says 'The wizard is ready to begin installation.' There is a paragraph of text: 'If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.' Below this is a section titled 'Current Settings:' with a list of settings: 'Setup Type: Typical', 'Destination Folder: C:\XPressionApps\Touch Factory Player\'', and 'User Information: Name: xpnqo, Company:'. At the bottom, there are three buttons: '< Back', 'Install', and 'Cancel'. The 'Install' button is highlighted in blue.

Touch Factory Player - Ready to Install Program

5. Select **Install**.

By default, Touch Factory Player will be installed in the **C:\XPressionApps\Touch Factory Player** folder.

When the installation is complete, the **InstallShield Wizard Completed** page opens.



Touch Factory Player - Installation Complete

6. Select **Finish**.

The installation will create a Touch Factory Player icon on the desktop and a Touch Factory Player shortcut in the **Start** menu.

Configuring Touch Factory Player

This section of the user guide describes how to configure the Touch Factory Player. See the following topics for instructions:

[Adding and Removing Project Files](#)  56

[Showing/Hiding the Console](#)  58

[Enabling/Disabling the Extended Console](#)  59

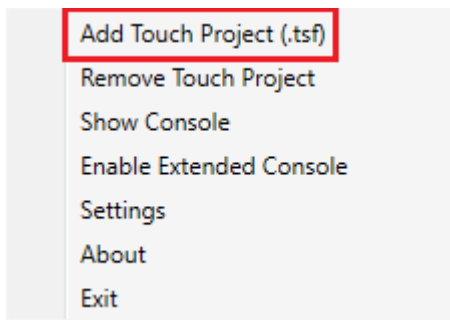
[Configuring Settings](#)  60

Adding and Removing Project Files

The project files (with the extension .tsf) are the workflow files created in Touch Factory Designer. They assign touch events to selected scene elements in an XPression project.

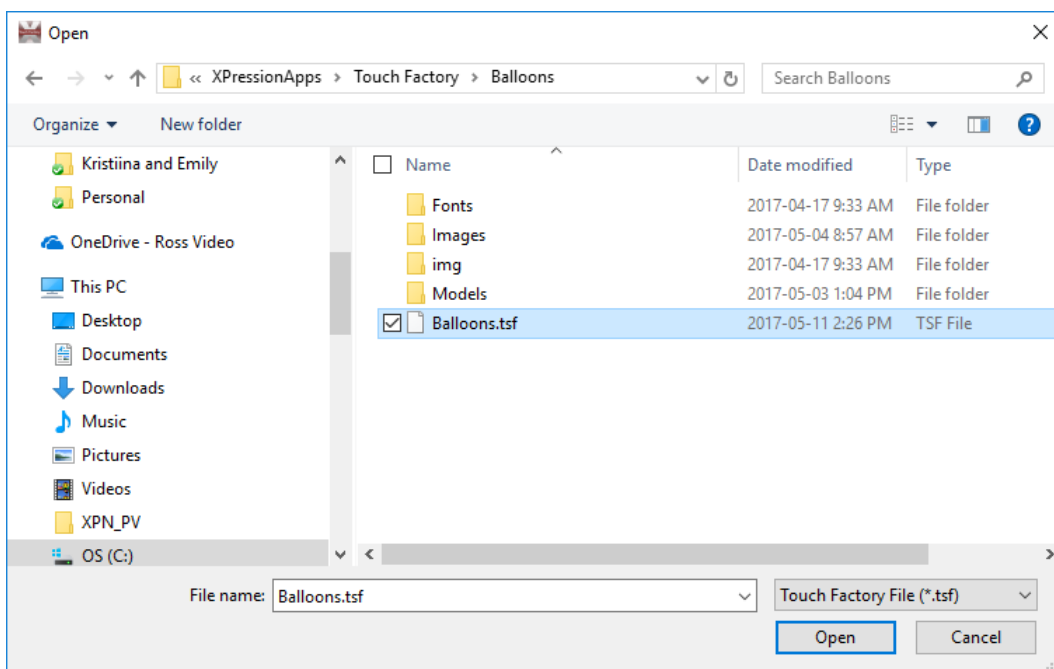
To add a project file:

1. Right-click the Touch Factory Player icon in the system tray.
2. From the context menu, select **Add Touch Project (.tsf)**.



Context Menu - Add Touch Project

3. In the **Open** dialog, browse to the location of your Touch Factory project files, select a file and select **Open**.

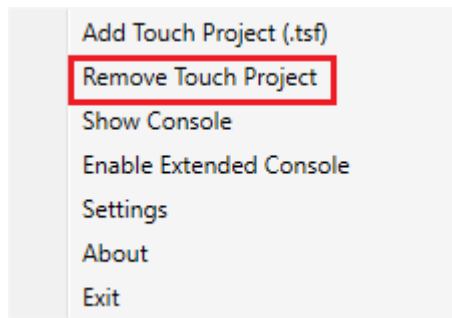


File Explorer - Add Configuration File

The selected file is added to the Touch Factory Player project list.

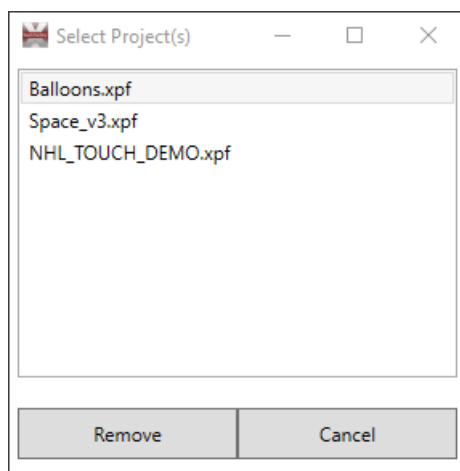
To remove a project file:

1. Right-click the Touch Factory Player icon in the system tray.
2. From the context menu, select **Remove Touch Project**.



Configuration Menu - Remove Touch Project

The **Select Project(s)** dialog opens.



Select Project(s) and Remove

3. Select the project you want to remove and select **Remove**.

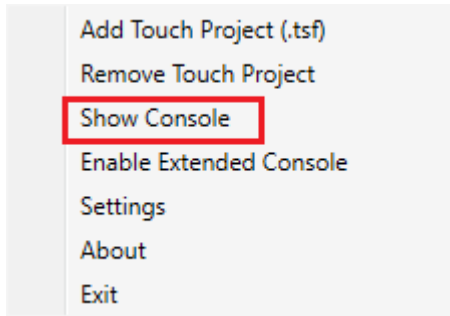
The selected project is deleted from Touch Factory Player.

Showing/Hiding the Console

The Touch Factory Player Console displays a log of events.

To show the console:

1. Right-click the Touch Factory Player icon in the system tray.
2. From the context menu, select **Show Console**.



Configuration Menu - Show Console

The console appears onscreen. In the context menu, a checkmark is displayed beside **Show Console** to indicate that the console is open.

3. Select the **Minimize** button in the top-right corner to minimize the console to the system tray.

To hide the console:

1. Right-click the Touch Factory Player icon in the system tray.
2. From the context menu, select **Show console**.

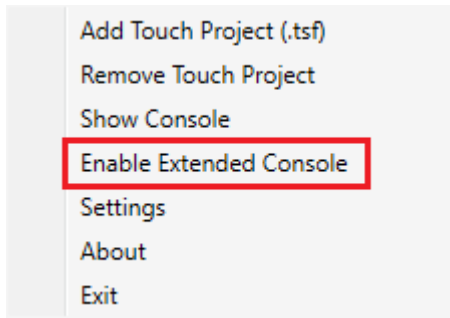
The console closes and the **Show Console** menu item is no longer checked.

Enabling/Disabling the Extended Console

The extended console displays additional log information while Touch Factory Player is running. This can be useful for debugging new projects and for understanding what's happening in the Touch Factory Player application.

To enable the extended console:

1. Right-click the Touch Factory Player icon in the system tray.
2. From the context menu, select **Enable Extended Console**.



Configuration Menu - Enable Extended Console

The console appears, if it's not already onscreen. In the context menu, a checkmark is displayed beside the **Enable Extended Console** menu item to indicate that this option is enabled.

To disable the extended console:

1. Right-click the Touch Factory Player icon in the system tray.
2. From the context menu, select **Enable Extended Console**.

The console closes and the **Enable Extended Console** menu item is no longer checked.

Configuring Settings

Touch Factory Player configuration settings are grouped into the following areas:

[General Settings](#)  61

[Interaction Settings](#)  64

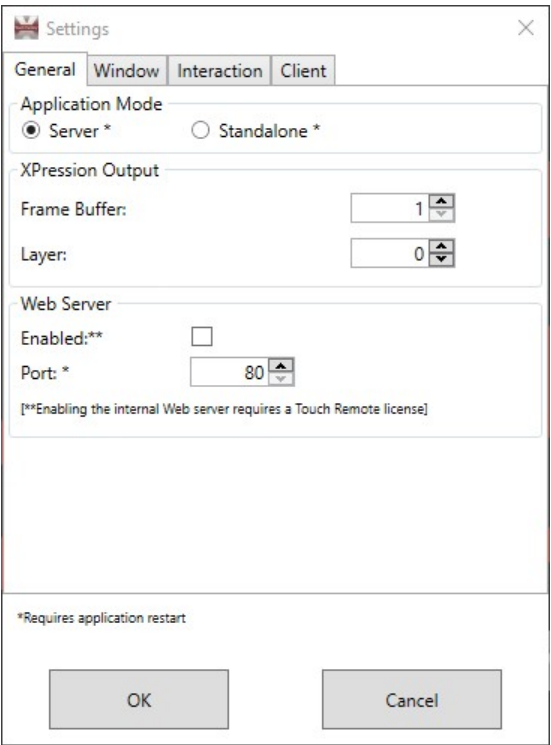
[Client Settings](#)  66

[Saving Settings](#)  68

When you have finished configuring the settings, save them to the **touchfactory.cfg** file. See [Saving Settings](#)  68 for more information.

General Settings

In the **General** tab you can select the application mode, specify the XPression output framebuffer and layer and enable the Web server.



Touch Factory Player Settings - General Tab

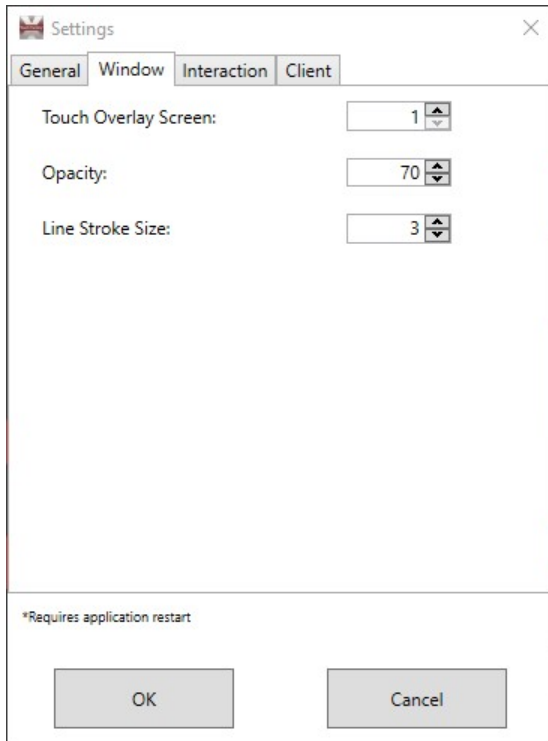
The settings are described in the table below.

Setting	Description
Application Mode	In Server mode, Touch Factory Player acts as a listener, running in the background, that will detect Touch projects and scenes that are externally set online and enable touch interaction with them, through a remote Touch Factory Client device. This is the default setting. In Standalone mode, Touch Factory Player displays the full-screen window locally and detects the touch events from a touch display directly connected to the XPression machine. Requires an application restart.
XPression Output	
Frame Buffer	Enter or use the arrows to select the output frame buffer that Touch Factory will use for the scene. Valid values: 1 and over Default value: 1
Layer	Enter or use the arrows to select the layer index that will be used for detecting when Touch scenes are being set online.

Web Server	
Enabled	Check to enable the internal Web server. Requires a Touch Remote license.
Port	The TCP Port number of the Web server being used to control Touch Factory from a remote Web browser. This value must be something other than 0. Standard Web servers use port number 80, but this port could be used for other processes. Select a port that isn't being used for anything else. Requires an application restart.

Window Settings

In the **Window** tab you can specify the monitor being used to display the Touch Factory Player main window (when running in **Standalone** mode), the transparency of the display and the stroke size for the touch drawing tool.



Touch Factory Player Settings - Window Tab

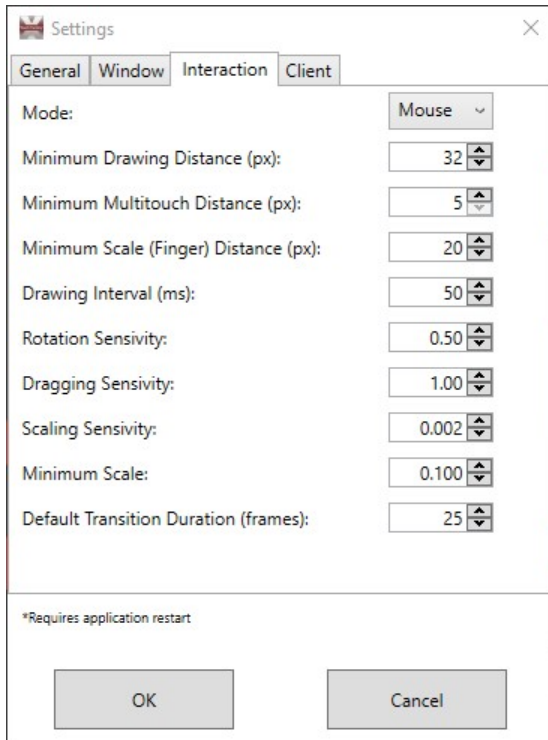
The settings are described in the table below.

Setting	Description
Touch Overlay Screen	Enter or select the number of the display monitor being used for the Touch Factory Player main window, when in Standalone mode.
Opacity	Enter or select the level of transparency for the Touch Factory Player main window. Low values are useful for testing purposes, particularly when only one monitor is being used and Touch Factory Player is being run and displayed on the same machine with a virtual output. Valid values: 1 to 100 Default value: 70
Line Stroke Size	Enter or select the thickness for the touch drawing/highlighter. Valid values: 1 to 50 Default value: 3

Interaction Settings

In the **Interaction** tab you can modify the touch settings. Touch Factory can detect actions from the user using a standard mouse input or a touchscreen. **Touch** mode is more sensitive than **Mouse** mode but only works in newer touch displays. For testing purposes, we recommend using **Mouse** mode, since it is compatible with most of the touch devices and you can use a standard mouse to trigger Touch Factory interactions.

★ The default values for the interaction settings are strongly recommended unless Touch Factory is not running properly in your system.



Touch Factory Player Settings - Interaction Tab

The settings are described in the table below.

Setting	Description
Mode	Use the drop-down to select the input mode. Valid values: Mouse and Touch Default: Mouse
Minimum Drawing Distance (px)	Enter or select the minimum distance in pixels (sensitivity) between consecutive touch actions that is going to be used for drawing a straight line between both points. Valid values: 5 to 100 Default value: 32
Minimum Multitouch Distance (px)	Enter or select the minimum distance in pixels (sensitivity) between two consecutive touch actions to detect a multi-touch interaction. Valid values: 5 to 100 Default value: 5
Minimum Scaling Distance (px)	Enter or select the minimum distance in pixels (sensitivity) between the two fingers while scaling a multi-touchable object. Valid values: 5 to 200 Default value: 20
Drawing Interval (ms)	Enter or select the amount of time in milliseconds between the drawing of one line and the next. This parameter works together with the minimum drawing distance in pixels to set the sensitivity on the drawing/highlighter functionality. Valid values: 10 to 1000 Default value: 50
Rotation Sensitivity	Enter or select a value to increase/decrease the sensitivity of a multi-touch rotation action. Valid values: 0.01 to 2.00 Default value: 0.50
Dragging Sensitivity	Enter or select a value to increase/decrease the sensitivity of a multi-touch drag action. Valid values: 0.001 to 2.00 Default value: 1.00
Scaling Sensitivity	Enter or select a value to increase/decrease the sensitivity of a multi-touch scale action. Valid values: 0.001 to 2.000 Default value: 0.002
Minimum Scale	Enter or select the minimum scale value of an object if resizing it. This prevents resizing an element to such a small size that the user will not be able to interact with it. Valid values: -1.000 to 1.000 Default value: 0.100
Default Transition Duration (frames)	The default duration in frames for a transition from one scene to another. Default value: 25

Client Settings

In the **Client** tab you can specify the data port, IP address and Remote Port that will be used to send the frame buffer image from the XPression machine to the remote device, as well as the image resolution.

Settings

General Window Interaction **Client**

Data Port: 9093

Remote Client 01 (PC/Ethernet)*

☐ Enable Streaming - PC**

IP (01):* 127.0.0.1

Port (01): * 9997

Image Quality (01): Low

Remote Client 02 (Tablet/Wi-Fi)*

☐ Enable Streaming - Tablet**

IP (02): * 127.0.0.2

Port (02): * 9998

Image Quality (02): Low

[**Streaming to a remote client requires a Touch Remote license]

*Requires application restart

OK Cancel

Touch Factory Player Settings - Client Tab

The settings are described in the table below.

Setting	Description
Data Port	Enter or select the number for the UDP port on which Touch Factory Player will listen for incoming remote clients messages. Applies to Server Mode only. This setting must match the setting for the Data Port in the Network Settings ¹³ tab of the Touch Factory settings.
Remote Client 01 (PC/Ethernet)	
Enable Streaming - PC	Select to enable streaming the output frame buffer frames (at approximately one frame per second) from XPression to the client application. Requires Touch Remote license.
IP (01)	Enter the IP address of the remote client PC.
Port (01)	Enter or select the port number of the remote client PC. The default port is 9997 .

Image Quality (01)	Select the resolution of the frames that are streamed from XPression to the client application. Frames are streamed at approximately one frame per second. The options are: • Low (this is the default and recommended setting) • Medium • High
Remote Client 02 (Tablet/Wi-Fi)	
Enable Streaming - Tablet	Select to enable streaming the output frame buffer frames (at approximately one frame per second) from XPression to the client application. Requires Touch Remote license.
IP (02)	Enter the IP address of the remote client tablet.
Port (02)	Enter or select the port number of the remote client tablet. The default port is 9998.
Image Quality (02)	Select the resolution of the frames that are streamed from XPression to the client application. Frames are streamed at approximately one frame per second. The options are: • Low (this is the default and recommended setting) • Medium • High

Saving Settings

Touch Factory Player settings are saved as a touchfactory.cfg file in **C:\XPressionApps\Touch Factory Player**.

To save your settings:

1. At the bottom of the **Settings** screen, select **OK**.

A confirmation dialog opens to let you know your settings were successfully updated.

Some settings require an application restart to take effect. These settings are marked with an asterisk (*). If you have changed any of these settings, you will get a confirmation dialog asking if you would like to restart the application.

2. In the confirmation dialog box, select **OK**.

Starting Touch Factory Player in Server Mode

The application mode is selected in the General tab of the Settings dialog. For more information see [General Settings](#).

In **Server** mode, Touch Factory Player works in conjunction with a number of other applications, so you will need to launch the following applications before starting Touch Factory Player:

- XPression BlueBox
- XPression Gateway
- XPression Remote Sequencer
- Newsroom Computer System (NCRS) MOS workflow
- XPression Touch Factory Client

To start Touch Factory Player in Server mode:

1. Launch XPression BlueBox, followed by XPression Gateway, XPression Remote Sequencer and your NCRS MOS workflow.

These applications will automatically communicate with each other.

2. In the NCRS application, load your XPression project.
3. In the XPression Remote Sequencer, from the **Connection Group** drop-down, select the group containing the XPression engine.
4. Also in the XPression Remote Sequencer, from the **Rundown Selection** drop-down, select the appropriate NCRS rundown.
5. In the XPression Remote Sequencer, double-click the scene you want to take online.
6. From the desktop icon or the **Start** menu, launch **Touch Factory Client**
7. From the desktop icon or the **Start** menu, launch **Touch Factory Player**.

Touch Factory Player will run in the background and place an icon in the Windows system tray.

By default, it will listen to **UDP Port 9093** for a Touch Factory Client (Remote) device.

8. Right-click the gray Touch Factory Player icon in the system tray and select **Add Touch Project (.tsf)**.
9. Navigate to your XPression project file and select **Open**.

The scene selected in the XPression Remote Sequencer is displayed on the Touch Factory Player monitor and can now be controlled by the player. The Touch Factory Player icon in the system tray changes to red. When the scene goes offline, the icon in the system tray will turn back to gray until another touch scene goes online.

Starting Touch Factory Player in Standalone Mode

The application mode is selected in the General tab of the Settings dialog. For more information see [General Settings](#).

In Standalone mode, Touch Factory Player works in conjunction with XPression, so you will need to launch XPression Studio or XPression BlueBox first and then start Touch Factory Player.

To start Touch Factory Player in Standalone Mode:

1. Launch the XPression project you want to control with Touch Factory Player.
2. In the XPression project, select on the **Sequence** tab (or press **F4**) and load the touch scenes into the sequencer.
3. Launch Touch Factory Player from the desktop icon.
Touch Factory Player will run in the background and place an icon in the Windows system tray.
By default, it will listen to **UDP Port 9093** for a Touch Factory Client (Remote) device.
4. Right-click the gray Touch Factory Player icon in the system tray and select **Add Touch Project (.tsf)**.
5. Navigate to your XPression project file and select **Open**.
6. In XPression, in the **Sequence** tab, double-click the scene you want to take online.
7. The selected scene is displayed on the Touch Factory Player monitor and can now be controlled by the player. The Touch Factory Player icon in the system tray changes to red. When the scene goes offline, the icon in the system tray will turn back to gray until another touch scene goes online.

Closing Touch Factory Player

You can close the Touch Factory Player without closing XPression, as described below.

To close Touch Factory Player:

1. Right-click on the Touch Factor Player icon in the system tray and select **Exit**.

OR

2. Press **Shift + Esc**.
3. In the **Confirmation** dialog that opens, select **Yes**.

Keyboard Shortcuts for Running Touch Factory Player in Standalone Mode

Here are some useful shortcuts for operating Touch Factory Player in Standalone mode:

- **Shift + Esc**: Close Touch Factory Player
- **Ctrl + F**: Add a project
- **Ctrl + R**: Remove a project
- **Ctrl + W**: Open the **Settings** window

Contact Us

Contact our friendly and professional support representatives for the following:

- Name and address of your local dealer
- Product information and pricing
- Technical support
- Upcoming trade show information

Technical Support	Telephone:	+1-844-652-0645 (North America) +800 3540 3545 (International)
	After Hours Emergency:	+1 613 • 349 • 0006
	Email:	techsupport@rossvideo.com

General Information	Telephone:	+1 613 • 652 • 4886
	Fax:	+1 613 • 652 • 4425
	Email:	solutions@rossvideo.com
	Website:	http://www.rossvideo.com

Visit Us

Visit our website for:

- Company information and news
- Related products and full product lines
- Online catalog
- Testimonials