VOYAGER
trackless studio

User Guide

VERSION 7.3.2

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.

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.)*

Voyager Trackless Studio User Guide

- Ross Part Number: 3850DR-001-7.3.2
- Version: 7.3.2
- Date/Time: 6/6/2025 11:01 AM

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

Copyright

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

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   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.

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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. **FREEWARE.** 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.

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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.

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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 Voyager Trackless Studio systems to be free from defects under normal use and service for the following time periods from the date of shipment:

- Voyager Trackless Studio Server — 12 months
- Voyager Trackless Studio 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 Voyager Trackless Studio 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

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Technical Support:	(+1) 613 · 652 · 4886
After Hours Emergency:	(+1) 613 · 349 · 0006
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E-mail for General Information:	solutions@rossvideo.com
Website:	http://www.rossvideo.com

Contents

Introduction

Voyager Trackless Studio provides a cost-effective virtual studio solution, using a small studio space and fixed cameras. Encoded camera heads and pedestals are not required. Complex camera movements and simulation of dramatic moving "jib" shots are possible, the virtual cameras are in a Voyager virtual set. The intuitive interface provides controls for multiple camera presets, transitions, and the ability to trigger events to manage media within the set and add insert graphics on layers above the virtual set shots.

Voyager Trackless Studio can support multiple cameras, based on the input capacity. The application can be operated remotely by a touch screen, Ross Video Dashboard, Carbonite (using Ross Talk) or a Web browser.

About This Guide

This user guide describes Voyager Trackless Studio, its configuration, and operation.

If, at any time, you have a question pertaining to the installation or operation of Voyager Trackless Studio, please contact us at the numbers listed in the Getting Help section. Our technical staff are always available for consultation, training, or service.

Document 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

Voyager Trackless Studio 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

Voyager Trackless Studio Requirements

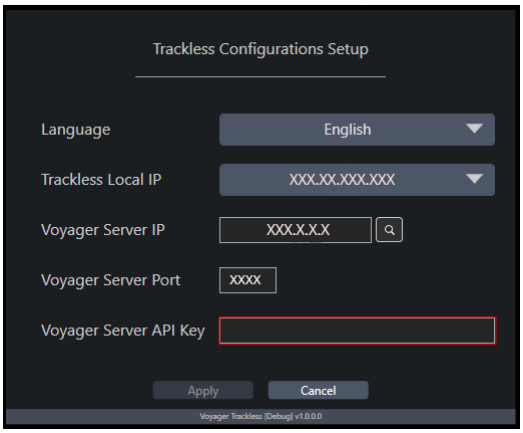
Install and launch the Voyager engine.

Voyager Trackless Studio Requirements:

- Voyager 7.3.1 or higher installed in the same local network and/or reachable by the client applications and devices you are using with Voyager Trackless Studio.
- Voyager Trackless Studio Plugin License must be included in the Voyager License dongle.
- Voyager Trackless Studio GUI requires a 1920 x 1080 Windows® display resolution, 100% scale is recommended.
- 4K 3840 x 2160 Windows® display resolution at 200% scale is supported.
- Firewall must be disabled or properly configured to enable required network communication.
- To view more information on licensed features, third party licenses and changes in this version, see **Help > About** in the Voyager Trackless Studio interface.

Launching Voyager Trackless Studio

The **Trackless Configurations Setup** dialog box opens the first time you launch the program after installation. You will use this dialog to establish a connection between Voyager Trackless Studio and the Voyager engine.



Trackless Configuration Setup

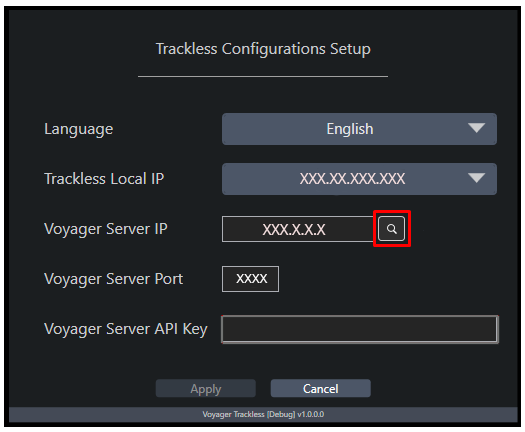
To configure Voyager Trackless Studio and connect with the Voyager engine:

1. From the **Language** drop-down menu select an option to set the preferred language.
2. From the **Trackless Local IP** drop-down list select an IP address.
3. In the **Voyager Server IP** field, enter the **IP** address.

   The **Voyager Server IP** needs to match the target Voyager engine IP address.
4. In the **Voyager Server Port** field, enter the port number.

   The **Voyager Server Port** number needs to match the target Voyager engine **Web API** port. The port number can be found in the **Voyager** main menu **Window > Voyager > Web API Settings**.

   If the IP address and port number are unknown, select the search icon. Voyager Trackless Studio will detect and display the IP address and port number of any available **Voyager** engine with a **Trackless Plugin** enabled.



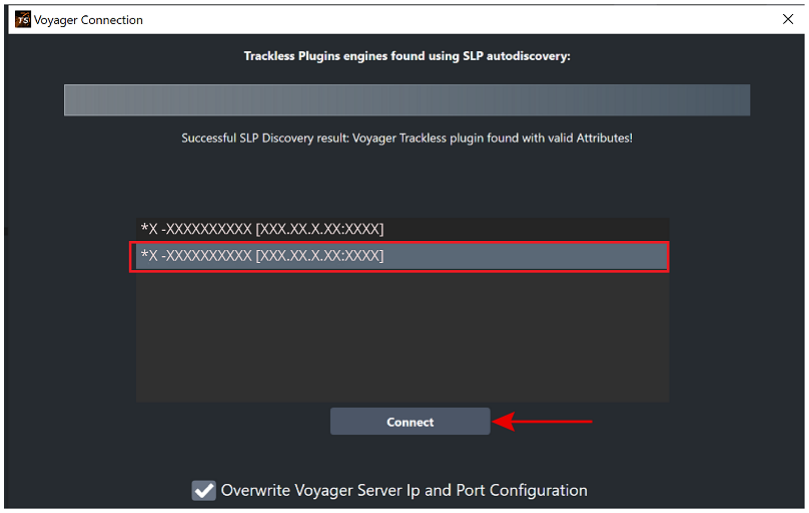
Select a Voyager Server IP and Port Number

5. Select **Apply**.

   If the connection does not work, either the **IP Address** or **Port** are incorrect. An **Autodiscovery** window opens and Voyager Trackless Studio will automatically detect and display the IP address and port number of any available **Voyager** engine with a **Trackless Plugin** enabled.

6. Double-click an **IP Address** or enter an IP address to match the one running the **Voyager** engine.

7. Select **Connect** to establish the connection.



IP Address Confirm

Voyager Trackless Studio will launch.

Trackless Ready Checklist

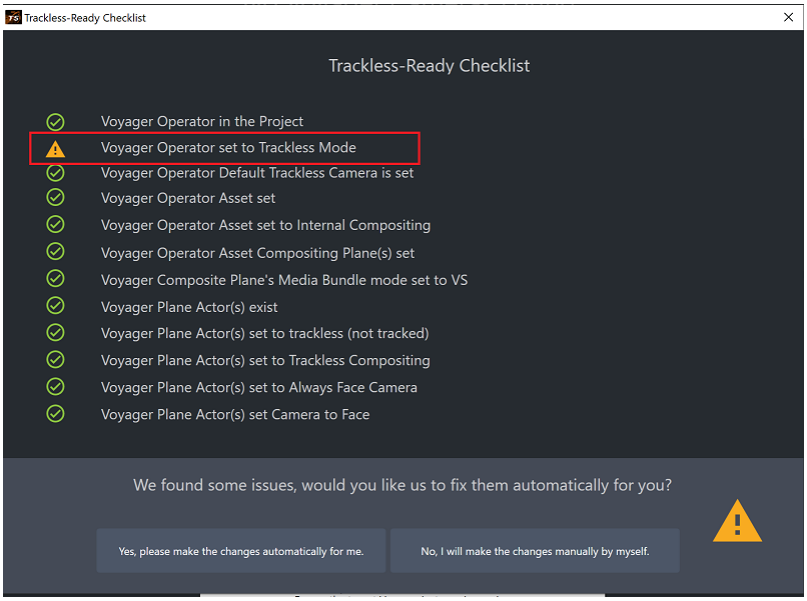
When opening your project in Voyager Trackless Studio you may encounter a **Trackless-Ready Checklist** pop-up that lists any Voyager issues that need to be fixed in order for the project to be **Trackless-Ready**.

- Select **Yes, please make the changes automatically for me**.

  The updates will automatically be applied in **Voyager** and the project is now **Trackless-Ready**.

  OR

  Select **No, I will make the changes manually by myself**.



Trackless Ready Checklist

Control

Voyager Trackless Studio can be controlled using a number of Ross and third party products, as described in the following topics.

This chapter covers the following topics:

Controlling Voyager Trackless Studio with RossTalk Commands

The **RossTalk** port is configured in the **Voyager Trackless Studio** Servers**.** The **Port** must not be in use by any other application while **Voyager Trackless Studio** is running and it must be allowed within the computer firewall settings.

Refer to Appendix A: Enabling a Port Number in the Firewall.

See Appendix D: RossTalk Commands for a list of RossTalk commands.

Controlling Voyager Trackless Studio from DashBoard

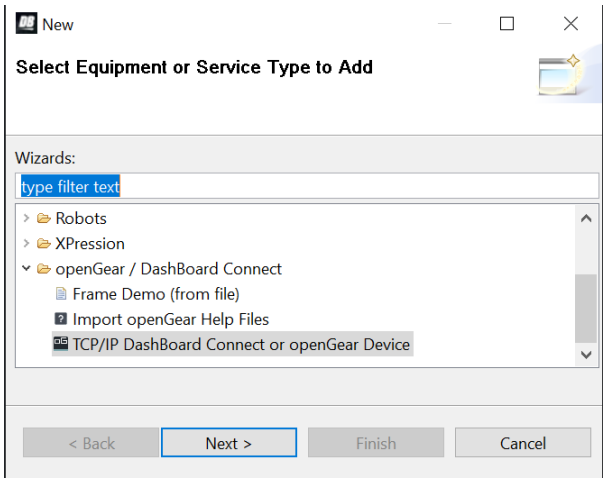
DashBoard is an open platform tool for creating custom workflows to control IP-based devices that can be used with most Ross Video products. It is available for download (free) from the Ross Video Website.

When DashBoard has been enabled in Voyager Trackless Studio and a connection has been established, you can trigger events and recall existing camera presets from the DashBoard panel. You can also create a custom DashBoard panel containing only those events and camera presets you will be using.

To enable DashBoard in Voyager Trackless Studio, refer to Servers.

To connect Voyager Trackless Studio to DashBoard:

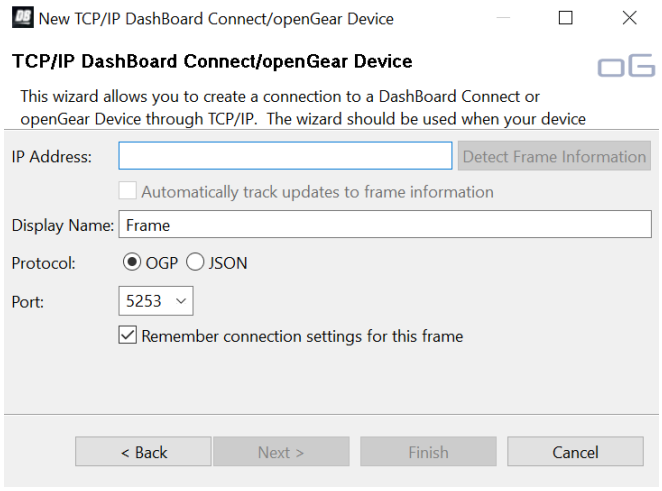
1. Launch **DashBoard** from the desktop icon.
2. Select the **Add New Connection (+)** button in the **Basic Tree View** toolbar to open the **Select Equipment or Service Type to Add** dialog.



Select Equipment or Service Type to Add Dialog

3. Expand the **openGear / DashBoard Connect** folder.
4. Select **TCP/IP DashBoard Connect** or **openGear Device** and select **Next**.

   The **New TCP openGear Frame Connection** dialog opens.

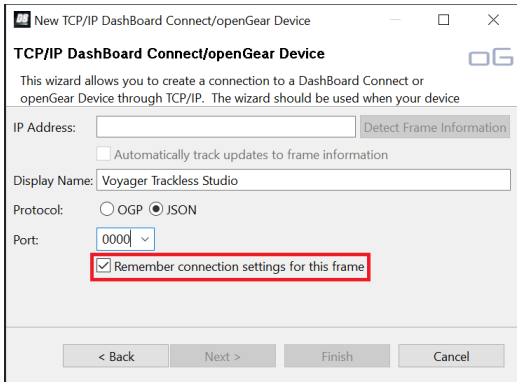


New TCP openGear Frame Connection Dialog

5. In the **IP Address** field, enter the IP address of the computer running Voyager Trackless Studio.

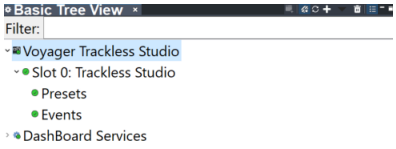
★ Do not click **Detect Frame Information**.

6. In the **Display Name** field, enter `Voyager Trackless Studio`.
7. Select the **JSON Protocol** option.
8. Set the **Port** as the **DashBoard Server Port** from the **Trackless Settings** menu in Voyager Trackless Studio.
9. Select the **Remember connection settings for this frame** check box and select **Finish**.



New TCP openGear Frame Dialog

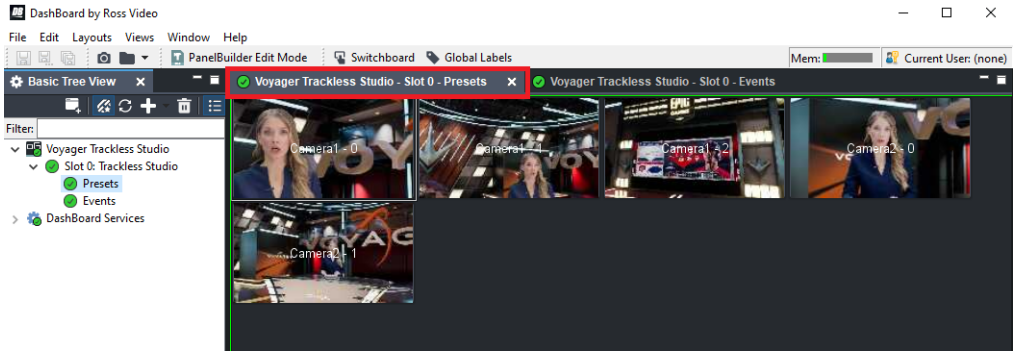
In the **Basic Tree View**, you'll see that Voyager Trackless Studio has been added to the list.



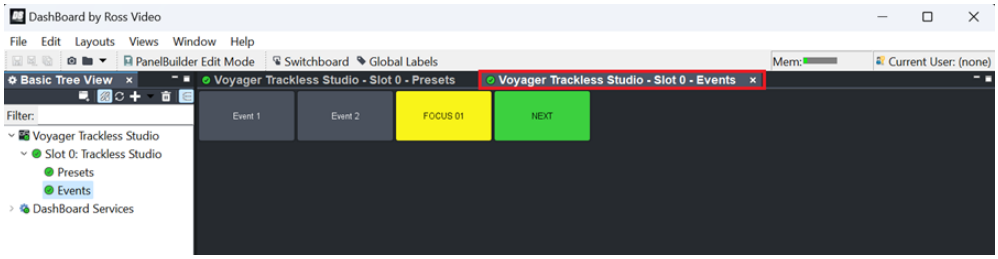
Voyager Trackless Studio in DashBoard Basic Tree View

To operate the latest Presets and Events:

1. In the **Basic Tree View**, expand Voyager Trackless Studio and double-click on **Presets** and and then on **Events** to open the panels.

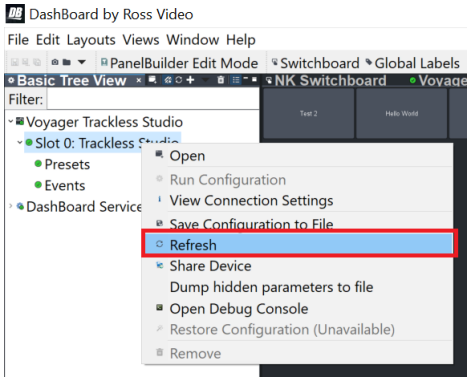


DashBoard Presets Panel



DashBoard Events Panel

2. Right-click **Slot 0: Trackless Studio** and select **Refresh** to update camera presets and events from Voyager Trackless Studio.



DashBoard Refresh

Controlling Voyager Trackless Studio with Stream Deck

Use **Stream Deck** and **Stream Deck+** with Voyager Trackless Studio and enable keys and knobs with actions to launch camera presets and events.

You can create and display titles for **Events, Camera Presets** and **Commands** to be read on **Stream Deck**.

To use Voyager Trackless Studio with **Stream Deck** and **Stream Deck+** you must install the **Voyager Trackless Stream Deck Plugin**. This component is selected during the installation of Voyager Trackless. If it wasn't selected, run the installation again and in the **Select Components** screen, select the **Voyager Trackless Plugin for Stream Deck** checkbox.

★In **Stream Deck+** only, you can assign multiple actions to each dial. See To configure multiple actions for a dial.

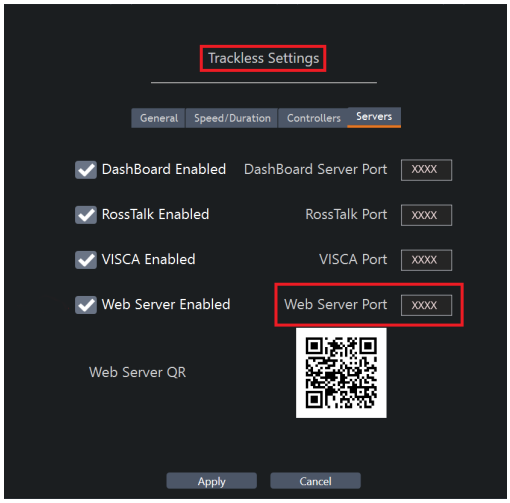
To configure Stream Deck in Voyager Trackless Studio

To configure a Stream Deck dial with Stream Deck+ in Voyager Trackless Studio

To configure Stream Deck in Voyager Trackless Studio:

1. From the Voyager Trackless Studio main menu, select **Options > Settings > Servers**.
2. Select the **Web Server Enabled** checkbox and note the **Web Server Port** to input into Stream Deck.

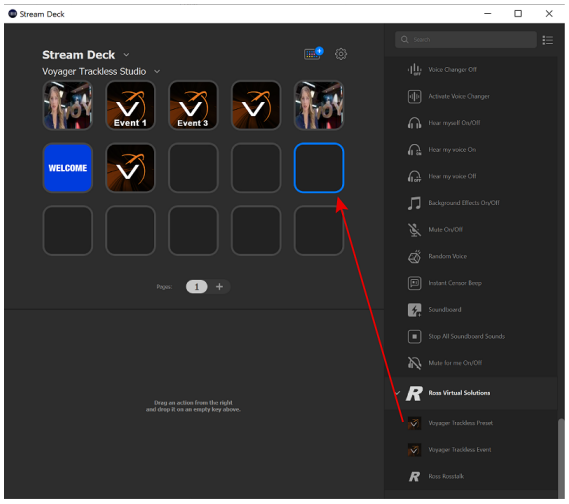
   For more information on the Web Server refer to Controlling Voyager Trackless Studio From a Web Interface.



Voyager Trackless Studio Web Server Settings

To add Presets, Events or RossTalk Commands to Stream Deck:

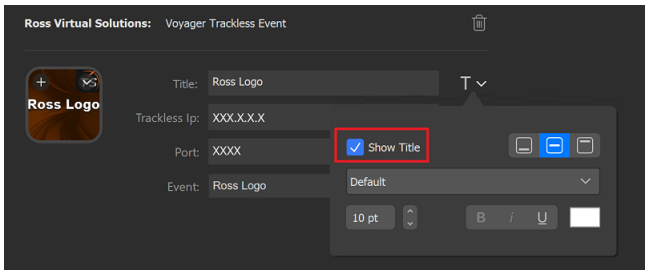
1. From the Stream Deck application, under the **Ross Virtual Solutions** tab, select a Voyager Trackless **Preset**, **Event** or **RossTalk Command** into a selected key.



Adding Presets, Events and RossTalk Commands to Stream Deck

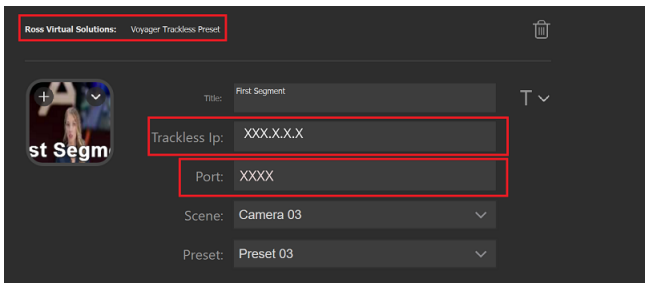
To configure a Stream Deck key with a camera preset:

1. In the **Preset** details, enter a **Title** for the preset that will be displayed on the Stream Deck key.
2. Select the arrow to open the **Title** menu where you can change the font, size, and placement.
3. Press **Enter** after a word in the title to move it to another line.



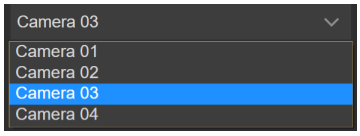
Stream Deck Title Menu

4. Set the **Trackless IP** address of the machine running Voyager Trackless Studio.
5. Set the **Port** number to match the **Web Server Port** from Voyager Trackless Studio.
6. For more information on Web Servers refer to Controlling Voyager Trackless Studio From a Web Interface.



Adding Camera Presets

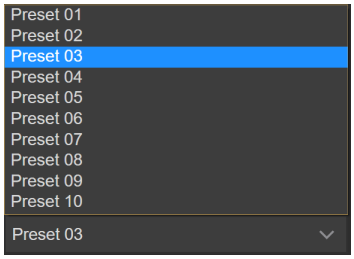
7. From the **Scene** drop-down, select the camera with the preset you want to assign to the key.



Stream Deck - Camera Selections

The camera has been assigned to the **Scene**.

8. From the **Preset** drop-down, select the preset you want to assign to the key.

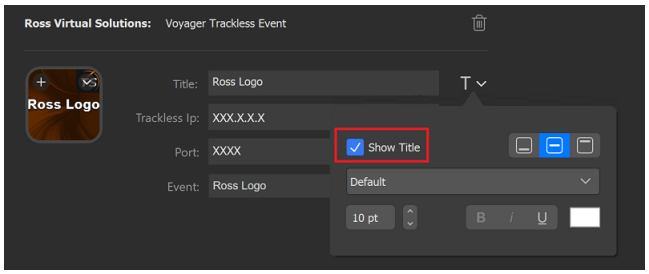


Stream Deck - Presets

The preset has been assigned.

To configure a Stream Deck key with an Event:

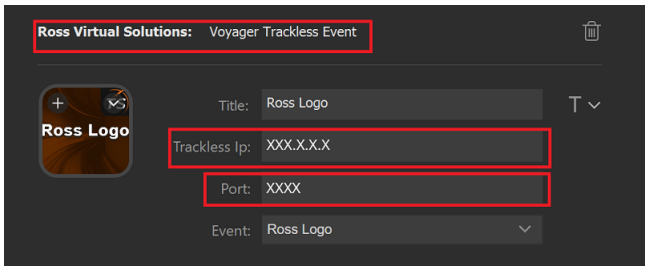
1. In the **Event** details, enter a **Title** for the event that will be displayed on the Stream Deck key.
2. Select the drop-down arrow to open the **Title** menu where you can change the font, size, and placement.



Stream Deck Title Menu

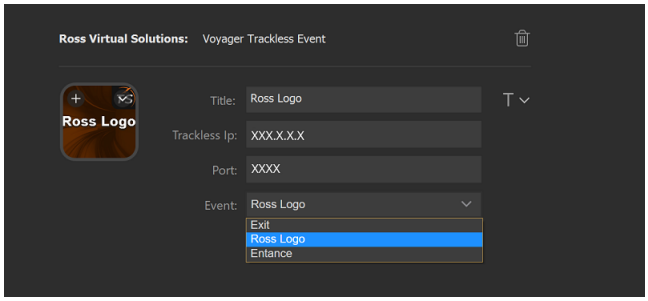
3. Set the **Trackless IP** to the IP address of the machine running Voyager Trackless Studio.
4. Set the **Port** number to match the **Web Server Port** from Voyager Trackless Studio.

   For more information on Web Servers refer to Controlling Voyager Trackless Studio From a Web Interface.



Stream Deck - Adding RVS Events

5. From the **Event** drop-down, select the **Event** you want to assign to the key.

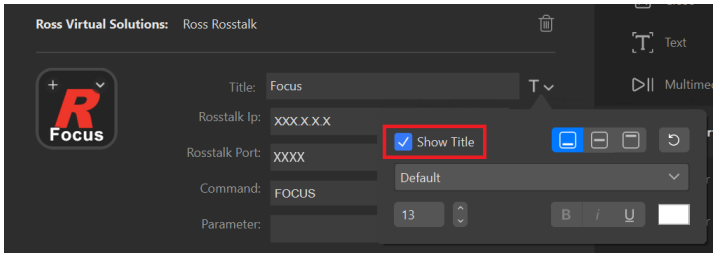


Stream Deck Event Selection

The event has been assigned.

To configure a Stream Deck key with a RossTalk Command:

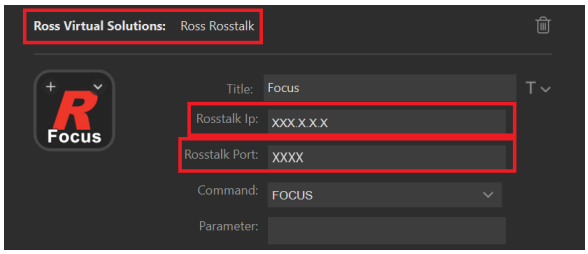
1. In the **RossTalk** details, enter a **Title** for the event that will be displayed on the Stream Deck key.
2. Select the drop-down arrow to open the **Title** menu where you can change the font, size and placement.



Stream Deck Title Menu

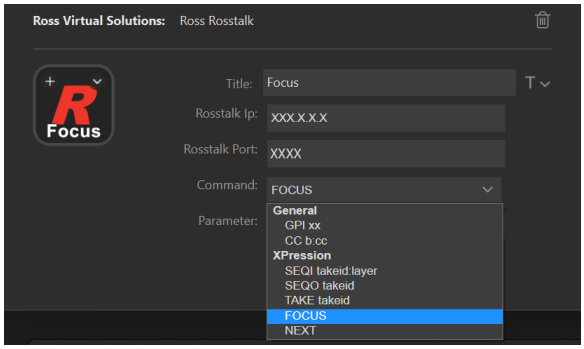
3. Set the **RossTalk IP** to the IP address of the machine running Voyager Trackless Studio.
4. Set the **Port** number to match the **RossTalk Port** from Voyager Trackless Studio.

   For information on **Voyager Trackless Studio Port** numbers refer to Servers.



Stream Deck RossTalk IP and Port Numbers

5. From the **Command** drop-down, select the **Command** you want to assign to the key.



Stream Deck Command Selection

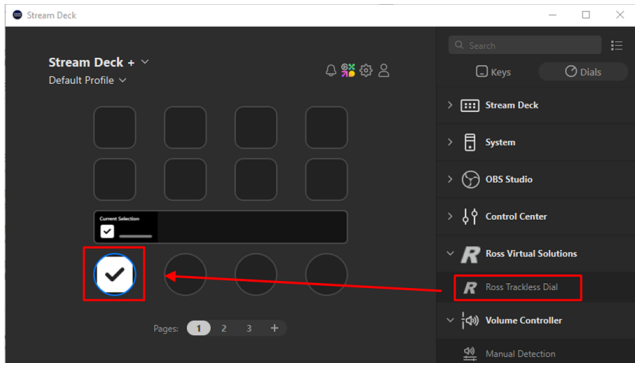
The RossTalk Command has been assigned.

To configure a Stream Deck Dial with Stream Deck+:

1. From the **Ross Virtual Solutions** tab, select and drag the **Ross Trackless Dial** to one of the 4 **Stream Deck+** dials.

   An icon will appear displaying that the default **Action [Current Selection]** has been added to the dial.

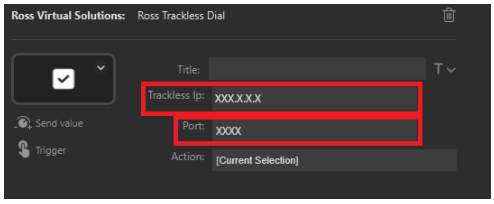
   Each **Action** will have its own icon. For information on each of the actions and their functions see the table below.



Stream Deck+ Ross Trackless Dial

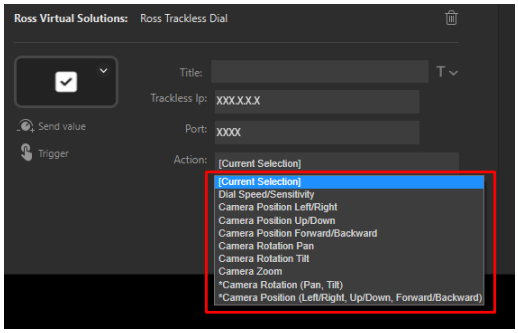
2. Set the **Trackless IP** to the IP address of the machine running Voyager Trackless Studio.
3. Set the **Port** number to match the **RossTalk Port** from Voyager Trackless Studio.

   For information on **Voyager Trackless Studio Port** numbers refer to Servers.



Stream Deck+ Ross Trackless Dial IP and Port Numbers.

4. From the **Action** drop-down, select the **Action** you want to assign to the **Ross Trackless Dial**.



Stream Deck+ Ross Trackless Dial - Action

The following table describes the **Action** functions.

Action	Function
[Current Selection]	The dial will change the value of the current selected number field in Voyager Trackless Studio.
Dial Speed/Sensitivity	The dial will change the **Speed/Sensitivity** of all the other dials. This is a general setting.
Camera Position Left/Right	The dial will manually move the camera to the **Left** or **Right**.
Camera Position Up/Down	The dial will manually move the camera **Up** or **Down**.
Camera Position Forward/Backward	The dial will manually move the camera **Forward** or **Backward**.
Camera Rotation Pan	The dial will manually rotate the camera to the left or right.
Camera Rotation Tilt	The dial will manually rotate the camera up or down.
Camera Zoom	The dial will manually zoom the camera in or out.
***Camera Rotation (Pan, Tilt)**	The dial supports both **Rotation Pan** and **Rotation Tilt**, push the dial to toggle between the modes. Rotating the dial will execute the selected toggle option: **Rotation Pan** or **Rotation Tilt**.
***Camera Position (Left/Right, Up/Down, Forward/Backward)**	The dial supports all three positions, **Left/Right, Up/Down** and **Forward/Backward**. Push the dial to toggle between them. Rotate the dial to execute the selected toggle option: **Move Left/Right, Up/Down** and **Forward/Backward**.

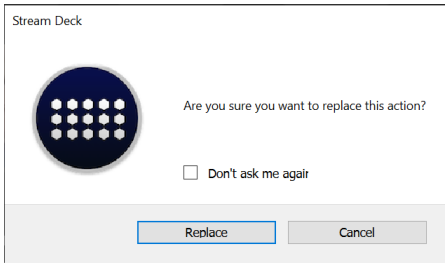
To configure multiple actions for a dial:

1. Right-click a dial that has been added to the **Stream Deck+** UI and select **Move to Dial Stack**.
2. In the **Dial Stack** window, from the right side, select and drag as many **Ross Trackless Dials** as you need into the **Dial Stack** list.
3. In the **Dial Stack** list, select an instance of the **Ross Trackless Dial** and in the **Ross Trackless Dial Details** section, enter a **Title** for the action.
4. From the **Action** drop-down, select the action you want to assign to that dial.
5. When you have finished assigning actions to the dials, close the **Dial Stack** window.

   When the dial on the **Stream Deck+** device is pressed, it will cycle through the **Dial Stack**. The current action will be indicated in the display.

To replace Camera Presets or Events:

1. Drag and drop an additional **Camera Preset** or **Event** over top of an existing one to replace that camera preset or event.
2. In the confirmation dialog, select **Replace**.



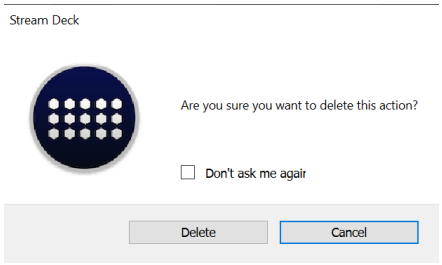
Stream Deck - Replace Action

To delete Camera Presets or Events:

1. Select the **Camera Preset** or **Event** you want to remove.
2. Right-click and select **Delete**.

   Alternatively, in the **Details** section, select the trash bin icon.

   In the **Confirmation** dialog, select **Delete**.

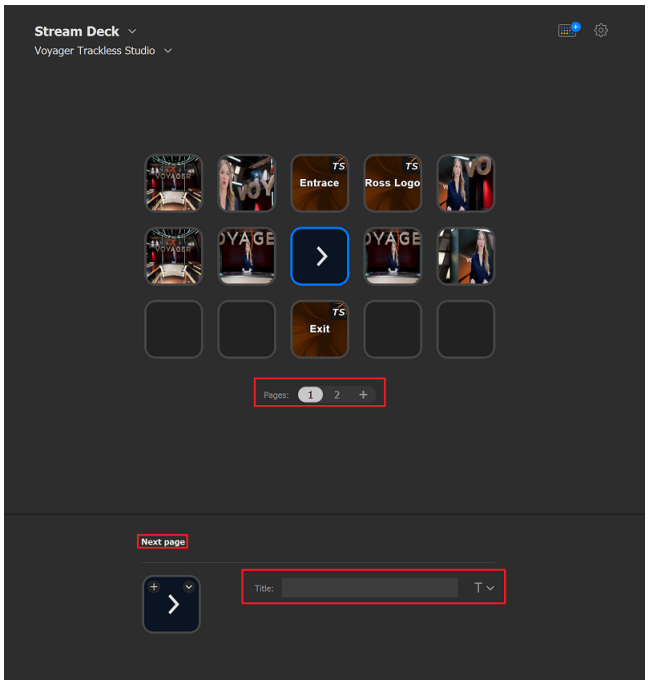


Stream Deck - Delete Action

To add additional pages in Stream Deck:

1. Select the **+** icon beside the **Page** indicator to add another page.
2. Return to the previous page and select the **Next** icon.
3. In the **Title** field below the grid, enter a name for the page.

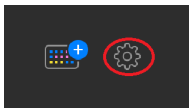
   This is optional, but useful if you want to group events or presets by show, action, time, etc.



Stream Deck Next Page Title

To make Voyager Trackless Studio a Default Profile in Stream Deck (optional):

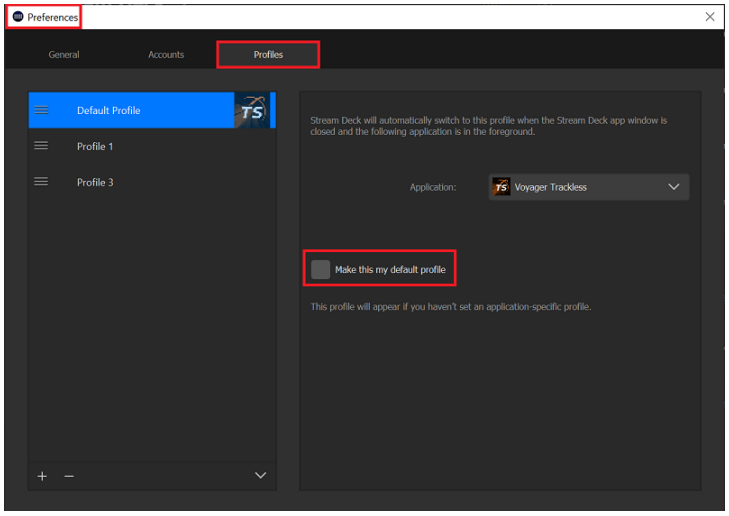
1. From the **Start** menu, open Stream Deck.
2. Select the **Gear** icon.



Stream Deck Gear Icon

1. In the **Preferences** window select **Profiles**.
2. On the left side of the **Profiles** tab, select **Default Profile**.
3. On the right side of the **Profiles** tab, from the **Application** drop-down, select **Voyager Trackless**.
4. If there is another application currently selected as the default profile, select that application on the left side and deselect the **Make this my default profile** checkbox.

5. Select **Voyager Trackless** again and select the **Make this my default profile** checkbox.



Stream Deck Preferences

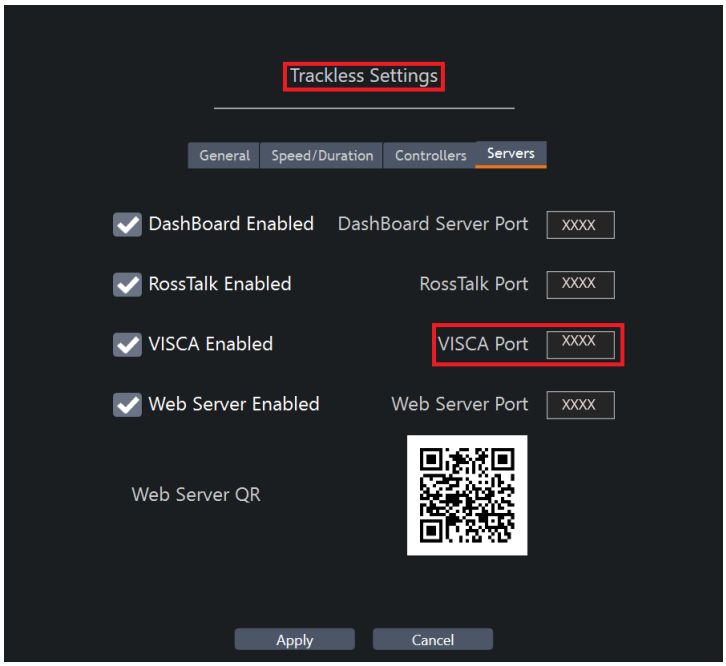
Controlling Voyager Trackless Studio with Sony VISCA Controller

Voyager Trackless Studio supports **Sony VISCA** protocol when using a **Ross Carbonite Switcher Joystick** or any other **Sony VISCA** compatible device to manually operate the virtual camera.

The implementation of the **Sony VISCA** protocol with Voyager Trackless Studio supports pan, tilt, focus, zoom, and recalling presets.

To configure Sony VISCA Controller:

1. From the Voyager Trackless Studio main menu, select **Options > Settings > Servers**.
2. Check to enable the **Sony VISCA Controller** and set the **Sony VISCA Port** for incoming **Sony VISCA** connections.



Voyager Trackless Studio Sony VISCA Settings

Supported Sony VISCA Commands

The following table provides a list of **Sony VISCA** protocol commands currently supported by Voyager Trackless Studio.

Command	Command Packet
RELATIVE POSITION (PAN TILT)	8x 01 06 01 VV WW XX YY FF
ZOOM	8x 01 04 07 XX FF
FOCUS	8x 01 04 08 XX FF
RECALL PRESET	8x 01 04 3F 01 XX FF

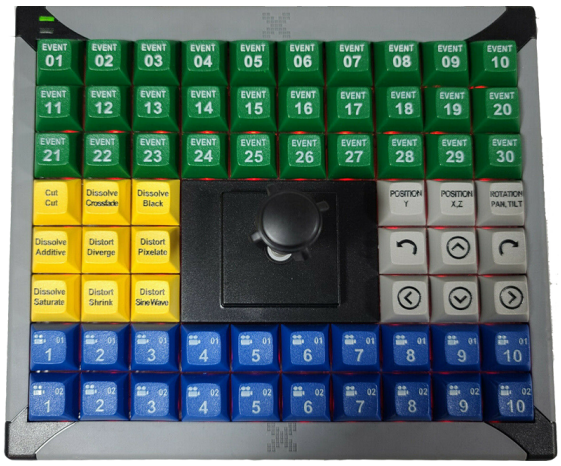
Controlling Voyager Trackless Studio from an XKeys Device

The XKeys controller is an external device you can use to trigger **Camera Presets** and **Events** that have been set up in Voyager Trackless Studio.

To use an XKeys device with Voyager Trackless Studio:

1. Connect the XKeys device to the same computer operating Voyager Trackless Studio.
   - Use the green keys at the top of the keypad to trigger events that have been added to the Voyager Trackless Studio **Event** panel.
   - Use the blue keys at the bottom of the keypad to trigger the camera presets created in Voyager Trackless Studio in the **Production Control** panel.

   Presets 1-10 can be called on for Cameras 1 and 2.



XKeys Keypad and Joystick

- Use the gray keys as follows:
  - The top 3 keys specify the joystick movements.
  - The 4 arrows move the camera forward, backward, left, and right accordingly.
  - The 2 center outer keys rotate the camera left and right.
- Use the yellow keys to select the **Camera Transition** effect.
  - Cut is the only key currently supported in Voyager Trackless.

Cut Key and Camera Controls

Controlling Voyager Trackless Studio From a Web Interface

Voyager Trackless Studio can be controlled from a web interface.

Voyager Trackless Studio includes an internal web server for calling camera presets and events from web browser-enabled devices such as Android WiFi tablets and iPad WiFi, among others.

This chapter covers the following topics:

Accessing the Web Server Controls

You will need to configure the **Web Server** port number in Trackless Studio Settings and in your web browser, as described below:

To access the Web interface:

1. From the Voyager Trackless Studio main menu, go to **Options > Settings > Servers** tab and enable the **Web Server**.
2. Use the default **Web Server Port** number or change it to suit your network.
3. Ensure the port you enter here matches the port in the **Browser URL** field.

Web Server Enabled

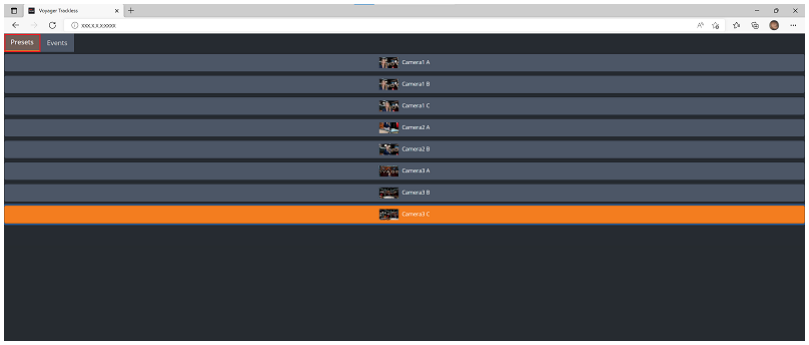
4. Select **Apply**.

   The application will restart with the new settings.

5. With Voyager Trackless Studio running, open a web browser and in the **URL** field, enter the **IP** address of the computer running Voyager Trackless Studio, followed by the **Web Server Port** number, separated by a colon, e.g.,`100.123.4.567:8083`.

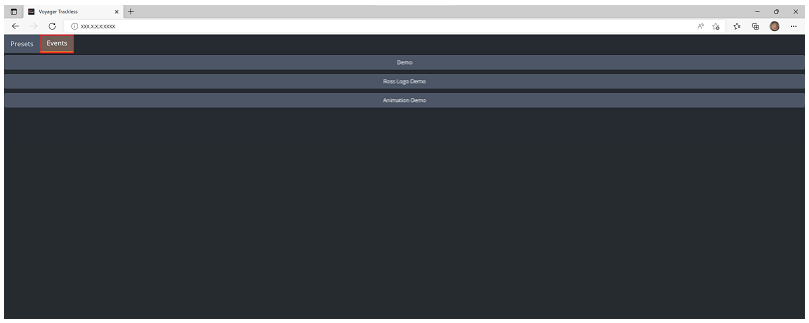
   A **Web GUI** is launched.

6. Use the **Camera Presets** interface to control the selection of camera movements created in Voyager Trackless Studio.



Web GUI – Camera Presets

7. Use the **Events** interface to trigger the events added in Voyager Trackless Studio.



Web GUI - Events

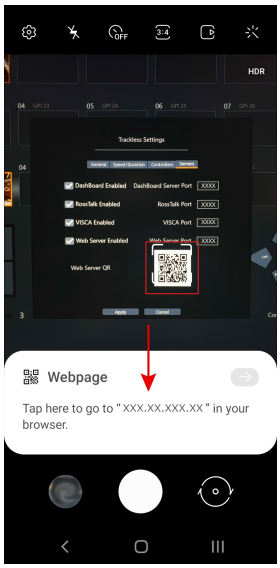
8. After making changes in Voyager Trackless Studio reload the page to view the updated list of **Camera Presets** or **Events**.
9. Select the **Refresh** symbol in the browser window to update the **Web GUI**.

Accessing Web Server Mobile Controls with a QR Code

You can control Voyager Trackless Studio with your mobile device by scanning the **Web Server QR**.

To access the Mobile Web interface:

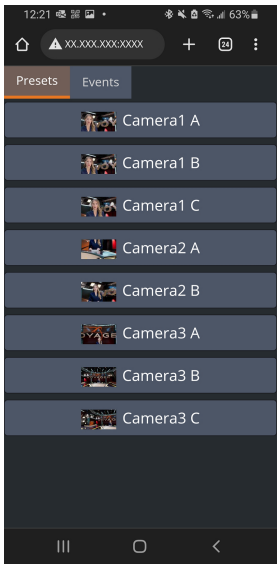
1. From the Voyager Trackless Studio main menu, go to **Options > Settings > Servers**.
2. Scan the **QR Code** with a mobile device camera.



IP Address from QR Scan

3. Select the **IP address** that pops up.

   A browser window will open and the **Mobile Web GUI** is launched.



Mobile Web GUI

★ If the **Mobile Web GUI** fails to launch, refer to Appendix A: Enabling a Port Number in the Firewall settings.

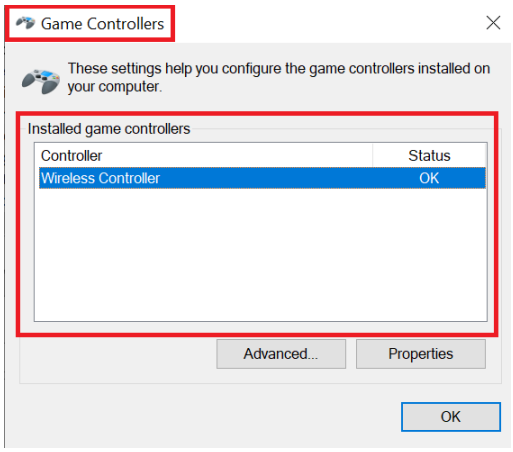
Triggering Events from a Game Controller

Connect game controllers to trigger events in Voyager Trackless Studio.

Validating a Game Controller in Windows:

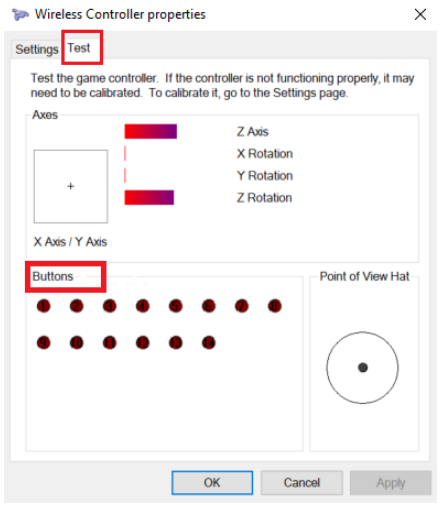
1. Connect a game controller to the computer either by cable or wireless connection.
2. In the **Startup Menu** search **Setup USB Game Controller**.
3. Confirm the added device has been registered in the list of **Installed Game Controllers**.

   Status is **OK** when properly connected.



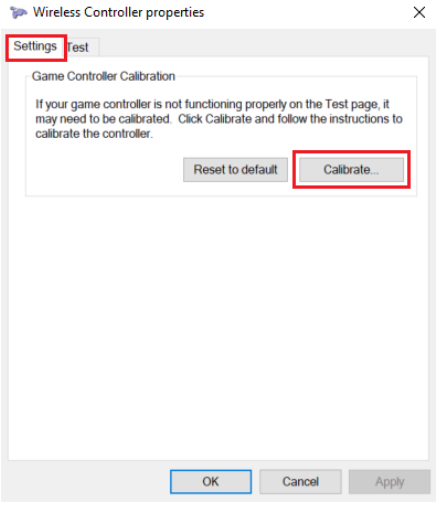
Game Controllers Window

4. Select **Properties**.
5. Test the game controller and view the active buttons.



Wireless Controller Properties - Test

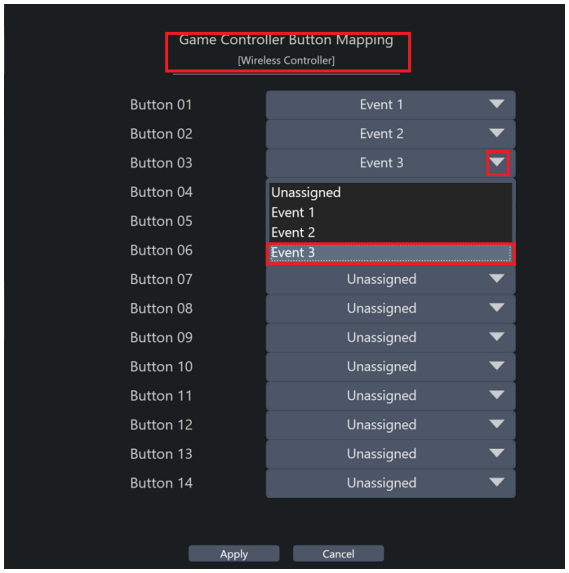
6. If the game controller is not functioning on the **Test** page, select **Settings > Calibrate** and follow the instructions to calibrate the controller.



Wireless Controller Properties - Calibrate

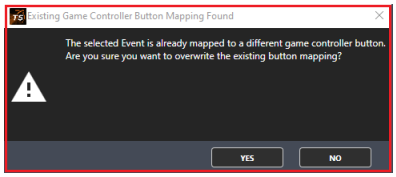
Configuring a Game Controller in Trackless:

1. From the Voyager Trackless Studio main menu, go to **Options > Settings > Controllers** and confirm that a game controller is enabled.
2. Select **Game Controller Button Mapping** and use the drop-down to assign each event to a button.



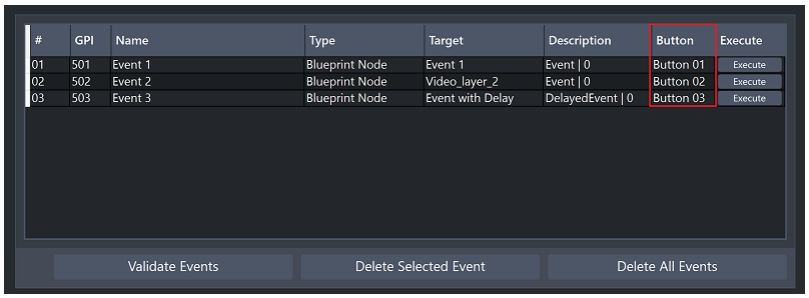
Voyager Trackless Studio - Game Controller Button Mapping

3. To overwrite a button that has already been mapped with an **Event**, select the **Event** you now want to trigger and select **YES** in the confirmation dialog.



Overwrite Button Mapping

In the **Events** tab, you can see which **Game Controller** button is assigned to each event.



Events Tab - Game Controller Buttons

★ Users can rearrange events by dragging and dropping. This will not change the game controller buttons assigned to the rearranged events.

Setup

There are three menus in the top-left corner of the Voyager Trackless Studio Interface, **File**, **Options**, and **Help**. Here you can set up your Voyager Trackless project and access the Voyager Trackless User Guide.

File

Options

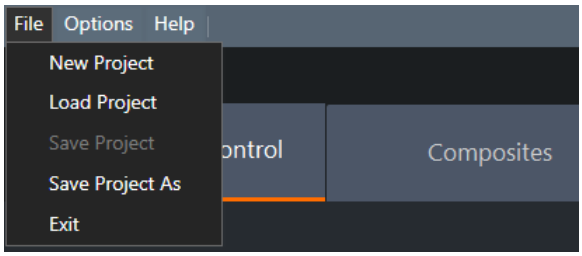
Help

File

The **File** menu contains options for loading and saving the Voyager Trackless Studio settings for your Voyager project and for exiting the application.

To load and save the Voyager Trackless Studio settings:

- From the Voyager Trackless Studio main menu, select **File** to view the drop-down menu and select one of the following options:



File Menu Options

  - Select **New Project** to start a new project.
  - Select **Load Project** to load project settings from a ***.voy** file.
  - Select **Save Project** to save project settings to a ***.voy** file
  - Select **Save Project As** to save project settings to a new file without overwriting the existing file.

★Selecting **Save Project** and **Save Project As** will store the entire configuration, including the thumbnail images in the selected folder.

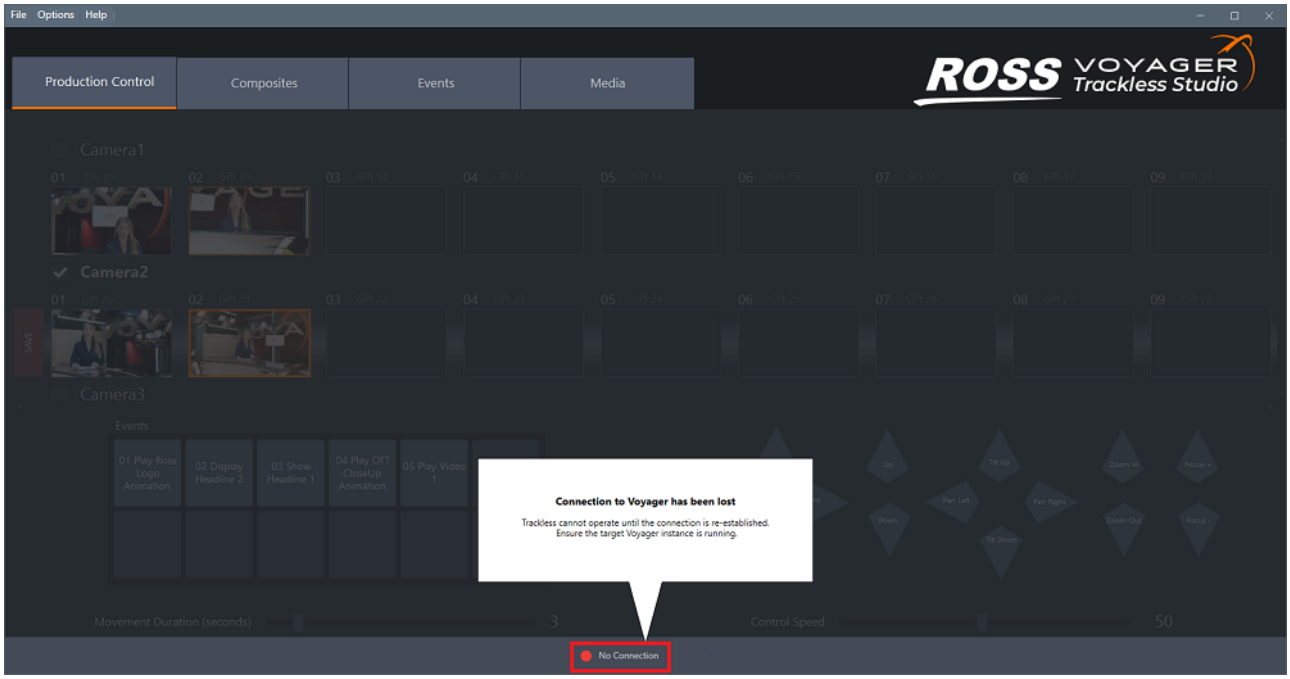
To exit the Voyager Trackless Studio application:

1. From the Voyager Trackless Studio main menu, click **File > Exit**.

   A prompt opens if any changes have not been saved.

2. Save your changes and exit Voyager Trackless Studio.

   If Voyager is closed before Voyager Trackless Studio, **No Connection** will display in the bottom bar.



Voyager Trackless Studio – Connection Lost

Options

The **Options** menu provides access to the **Trackless Settings** and the **Manage Frame Rate** dialog.

When launching Voyager Trackless Studio after the initial install, a dialog will open to allow configuration of the **General Settings**, these settings will be saved and available for use on any project. Any settings that require updating after the initial setup are configured in **Trackless Settings**.

General Settings

Speed/Duration

Controllers

Servers

Manage Frame Rate

Settings

In addition to the **General Settings**, this menu item provides access to the **Speed/Duration** settings, **Controller** selection and **Server** settings.

General Settings

Speed/Duration

Controllers

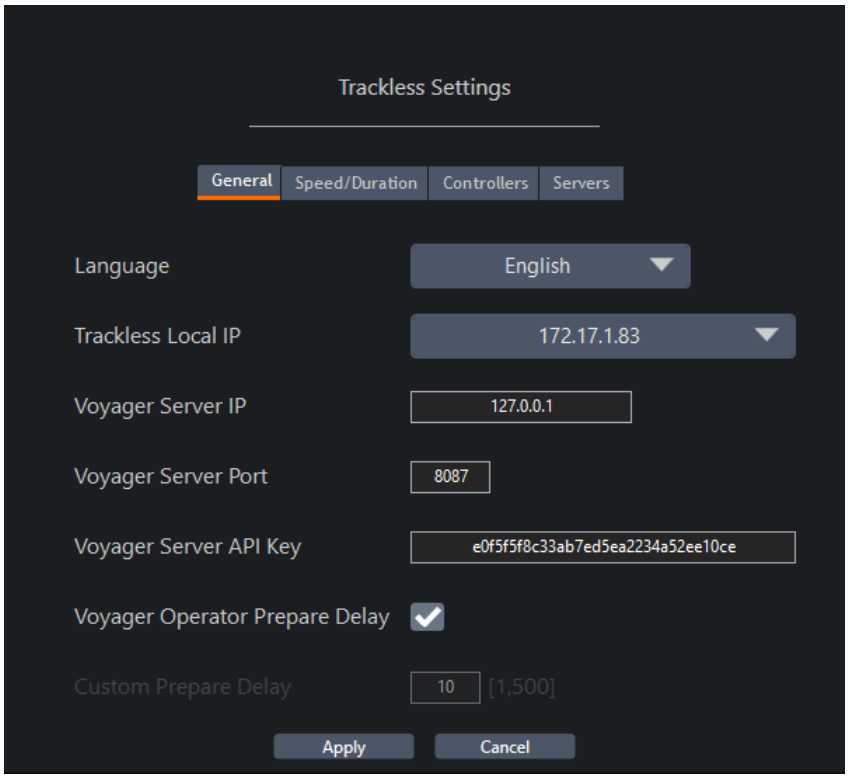
Servers

General Settings

The **General** settings define the language of the UI, the IP addresses of the Trackless machine and the Voyager server, the Voyager server port and API key and the Voyager Operator Prepare Delay setting.

To configure the General Settings:

1. From the Voyager Trackless Studio main menu, click **Options > Settings > General**.



Trackless Settings - General

2. From the **Language** drop-down, select the preferred language for the UI.
3. From the **Trackless Local IP** drop-down select an IP address, if there are multiple options.

   Ensure it is in the same local network and/or reachable by the client applications and devices you are using with Voyager Trackless Studio.
4. In the **Voyager Server IP** field, set the IP address.

   Ensure the **Voyager Server IP** matches the target Voyager engine IP address.
5. In the **Voyager Server Port** field, set the **Port** number.

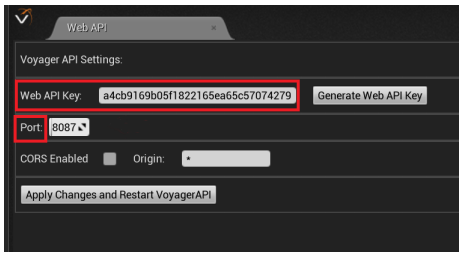
   Ensure the **Port** number matches the target Voyager engine Web API port.

   The **Port** number is located in the Voyager main menu **Window > Voyager > Web API Settings**.

   You will need to ensure the **Server Port** is not blocked by **Windows Defender Firewall**. For information about enabling ports in Windows, refer to Appendix A: Enabling a Port Number in the Firewall.

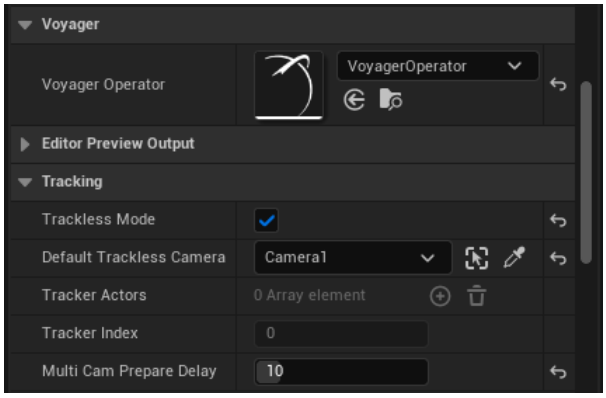
6. In the **Voyager Server API Key** field enter the **API Key** copied from Voyager.

   The **API Key** can be found in the Voyager main menu **Window > Voyager > Web API Settings**.



Server Port and Web API Key in Voyager

7. Select the **Voyager Operator Prepare Delay** checkbox, to use the **Multi Cam Prepare Delay** value set in Voyager on the **VoyagerOperator Actor**.



Voyager Operator Details - Multi Cam Prepare Delay

OR

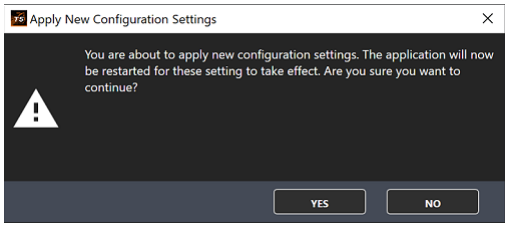
Clear the **Voyager Operator Prepare Delay** checkbox and set a **Custom Prepare Delay** in Voyager Trackless.

The **Multi Cam Prepare Delay** parameter allows the engine to process and render visual effects in a scene before the camera cuts to it.

To save new configuration settings:

1. Select **Apply** once configuration of all settings is complete.

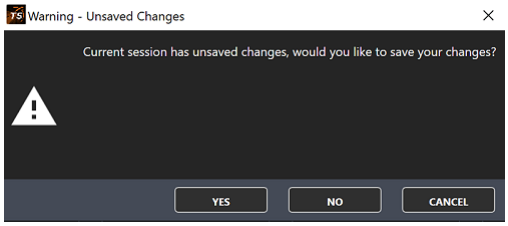
   A dialog will appear warning that the program will restart.



Apply Configuration Settings

2. Select **Yes**.

A dialog will prompt you to save any unsaved changes.



Saving Unsaved Changes

3. Name the project, if it is a new project and navigate to the preferred directory.
4. Select **Save**.

   The application will restart with the new settings.

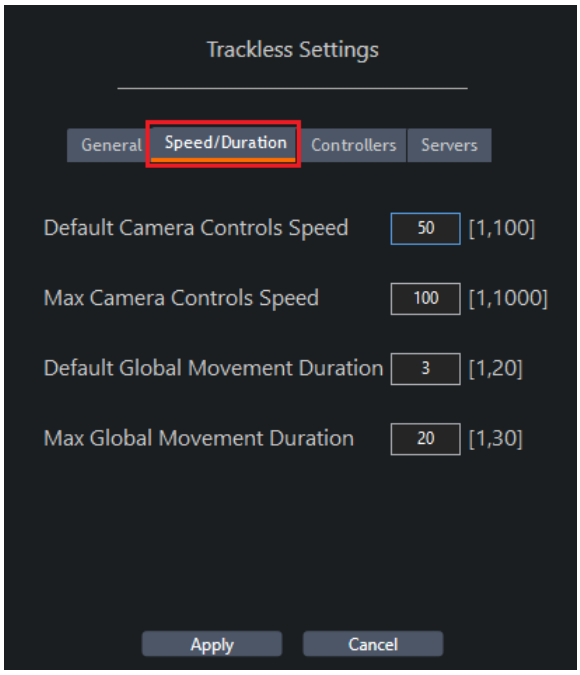
Speed/Duration

The speed and duration settings are configurable in the **Trackless Settings** tab. Once applied, the values will remain until reconfigured.

To adjust the Speed/Duration Settings:

1. From the Voyager Trackless Studio main menu, select **Options > Settings > Speed/Duration**.

   The settings shown are the default settings with the minimum and maximum settings displayed to the right of the input field.



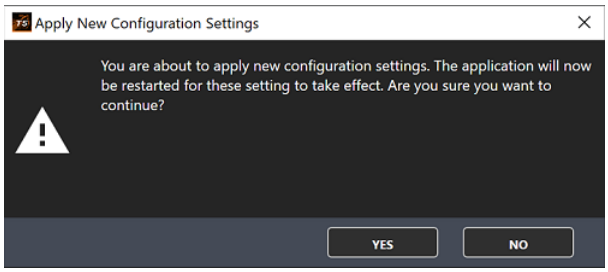
Trackless Settings - Speed/Duration

2. Enter the preferred **Camera Controls Speed** in the corresponding fields to adjust the speed at which the controls update the camera view.

To save new configuration settings:

1. Select **Apply** once configuration of all settings is complete.

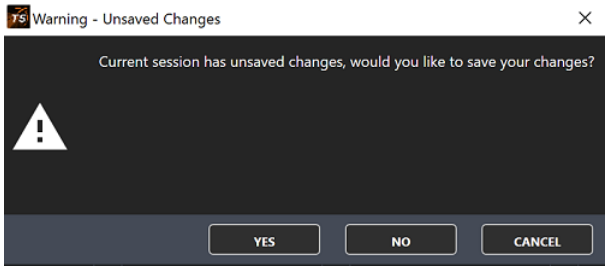
   A dialog will appear warning that the program will restart.



Apply Configuration Settings

2. Select **Yes**.

   A dialog will prompt you to save any unsaved changes.



Saving Unsaved Changes

3. Name the project, if it is a new project and navigate to the preferred directory.
4. Select **Save**.

   The application will restart with the new settings.

Controllers

You can connect an XKeys device or game controller to control Voyager Trackless Studio. By default, XKeys devices and game controllers are enabled.

Game controllers and XKeys Devices must first be connected to the Voyager Trackless Studio machine prior to launching Voyager Trackless Studio.

For information on connecting **Xkeys Devices** see Controlling Trackless Studio from an XKeys Device

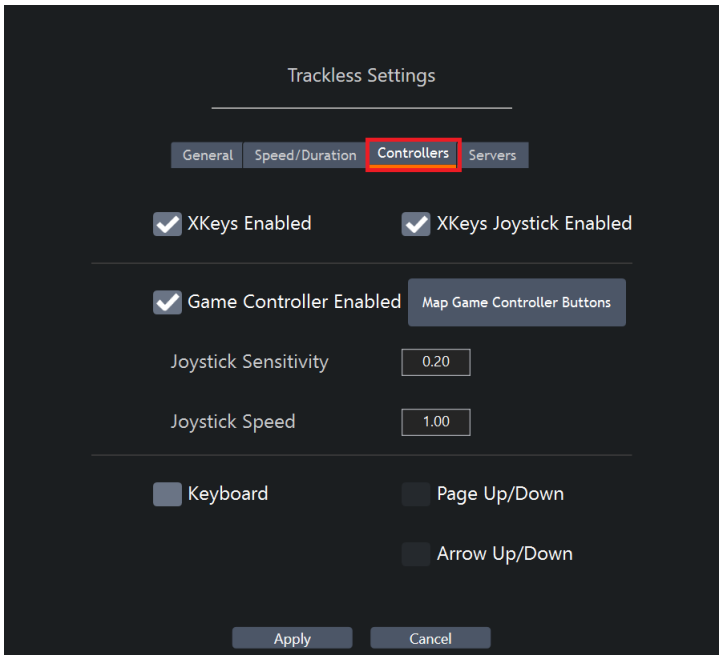
For information on connecting **Game Controllers** see Triggering Events from a Game Controller

To adjust the Controller Settings:

1. Physically connect the device to the machine running Voyager Trackless Studio.

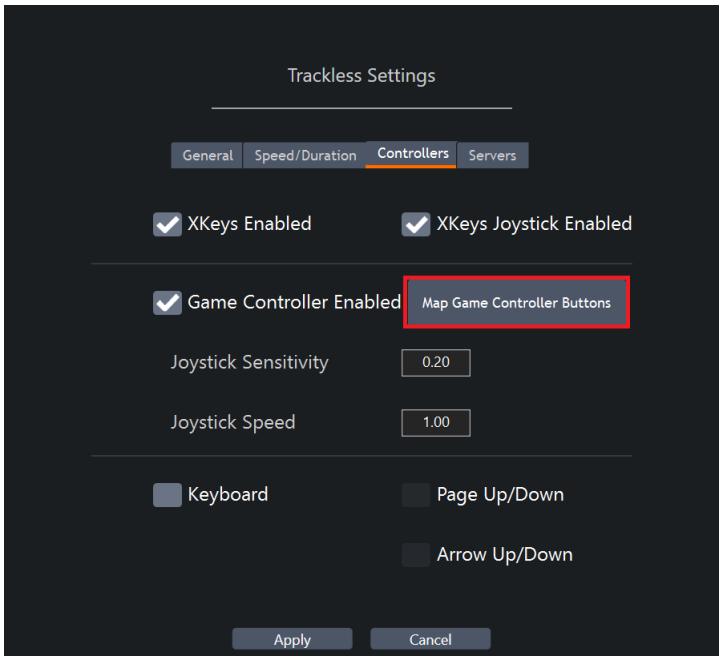
   If you are using an XKeys device, no further action is needed. By default, the **XKeys Enabled** checkbox will be enabled when starting Voyager Trackless Studio. If the **XKeys Enabled** check box is unchecked, the **XKeys Joystick Enabled** checkbox will not be accessible.

2. If you are using a game controller, go to the Voyager Trackless Studio main menu and select **Options > Settings > Controllers**.



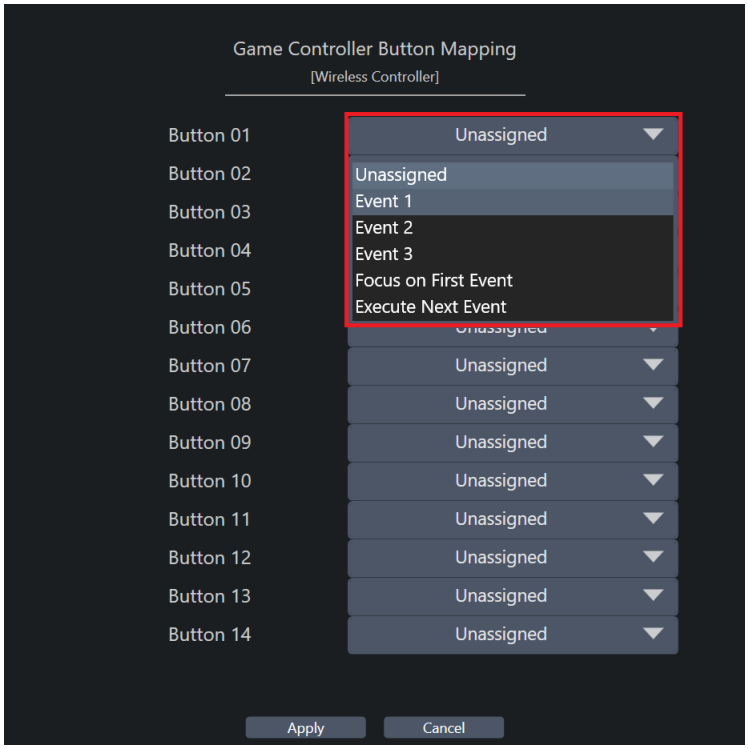
Trackless Settings - Controllers

3. Select the **Map Game Controller Buttons** button to open the **Game Controller Button Mappings** window.



Trackless Settings - Map Game Controller Buttons

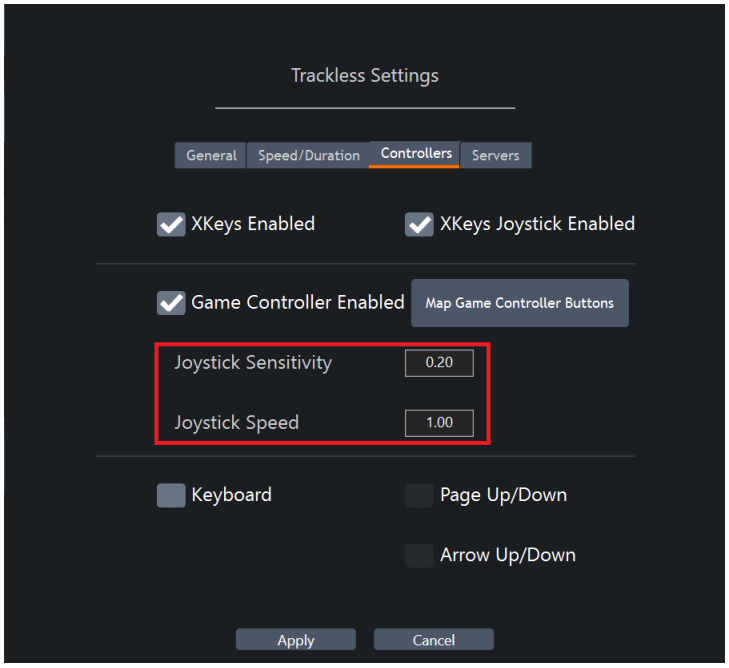
4. Use the drop-downs to assign available events to each of the game controller buttons.



Game Controller Button Mapping Buttons

5. When you've finished mapping the game controller buttons, select **Apply** to return to the **Trackless Settings** window.

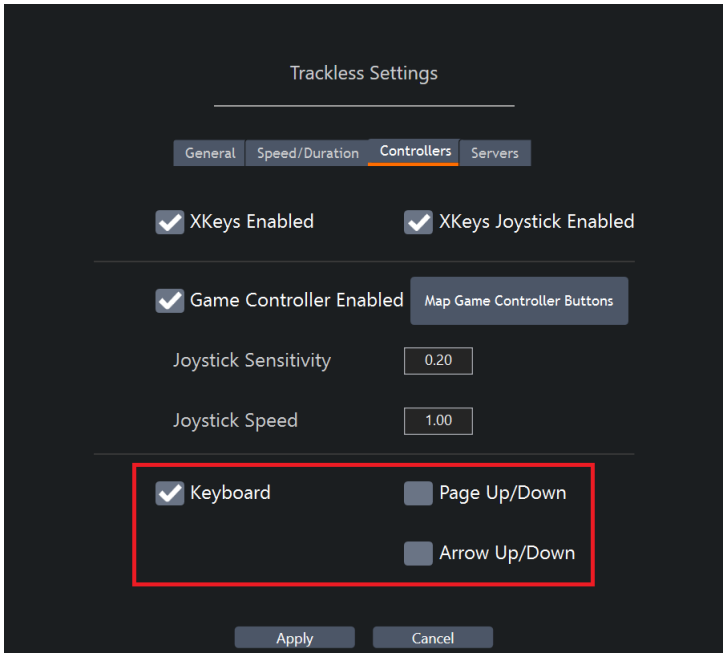
6. From the **Trackless Settings** window, adjust the **Joystick Sensitivity** and **Joystick Speed** if necessary.



Trackless Settings - Joystick Sensitivity and Joystick Speed

7. If you plan to use the **Keyboard Shortcut Keys**, select the **Keyboard** checkbox. For information on Voyager Trackless Studio **Keyboard Shortcuts** see Appendix C: Keyboard Shortcuts.

★ You must select the **Keyboard** checkbox to enable the **Page Up/Down** and **Arrow Up/Down** shortcuts. By default, the **Keyboard** checkbox and the use of **Keyboard Shortcuts** will not be enabled.

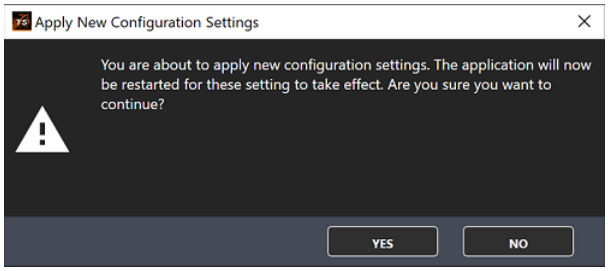


Trackless Settings - Keyboard Shortcuts

To save new configuration settings:

1. Select **Apply** once the configuration of all settings is complete.

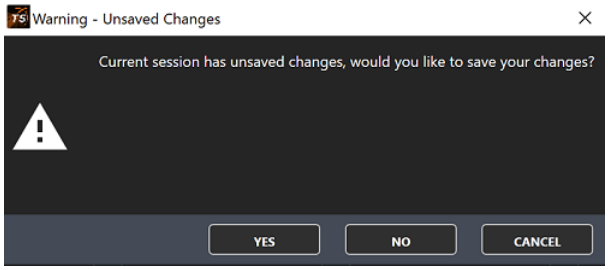
   A dialog will appear warning that the program will restart.



   Apply Configuration Settings

2. Select **Yes**.

   A dialog will prompt you to save any unsaved changes.



   Saving Unsaved Changes

3. Name the project, if it is a new project and navigate to the preferred directory.
4. Select **Save**.

   The application will restart with the new settings.

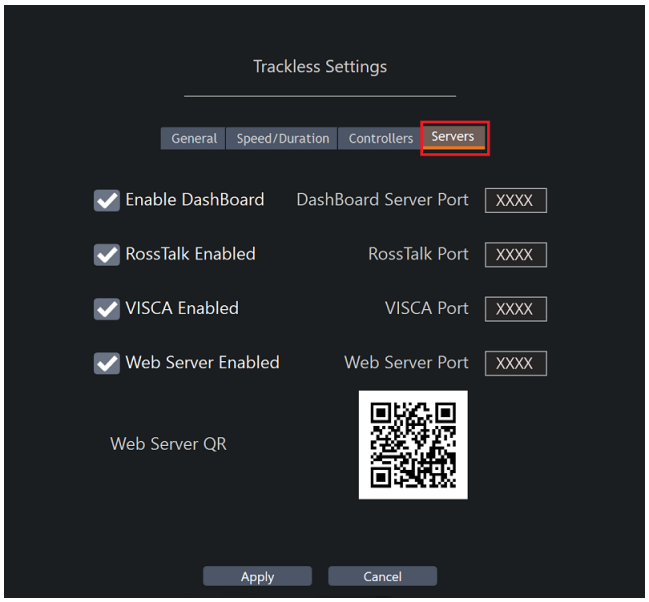
Servers

Voyager Trackless Studio compatible servers and a **Web Server QR** are found under the **Servers** tab. By default, all servers are enabled with dedicated port numbers. The ports shown are the default ports.

For information about using the **Web Server QR** code refer to Controlling Voyager Trackless Studio From a Web Interface.

To change a server port:

1. From the Voyager Trackless Studio main menu, select **Options > Settings > Servers**.



Trackless Settings - Servers

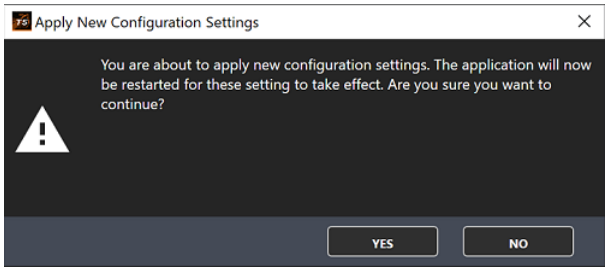
2. Update the application field if a different dedicated port is required and ensure it matches the port in the connected application.

   You will need to ensure the Server Port is not blocked by Windows Defender Firewall. For information about enabling ports in Windows, refer to Appendix A: Enabling a Port Number in the Firewall.

To save new configuration settings:

1. Select **Apply** once configuration of all settings is complete.

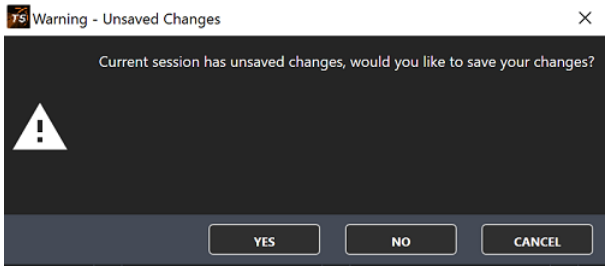
   A dialog appears warning that the program will restart.



   Apply Configuration Settings

2. Select **Yes**.

   A dialog prompts you to save any unsaved changes.



   Saving Unsaved Changes

3. Name the project, if it is a new project and navigate to the preferred directory.
4. Select **Save**.

   The application will restart with the new settings.

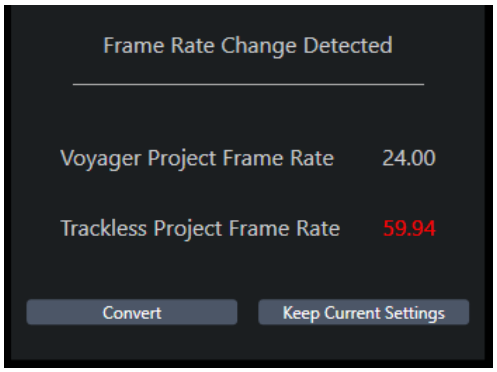
Manage Frame Rate

The **Manage Frame Rate** option detects when the connected Voyager projects's frame rate has changed from the last known/recorded frame rate for the Trackless project. When this happens, you may want to convert the Trackless project's frame rate to match the Voyager project's frame rate to ensure that the **Duration** set for a camera preset movement gives the expected results.

To convert the frame rate:

1. Select **Options > Manage Frame Rate**.

   If the frame rates of the Voyager project and Trackless projects are different, the **Trackless Project Frame Rate** will appear in red.

   Frame Rate Change Detected

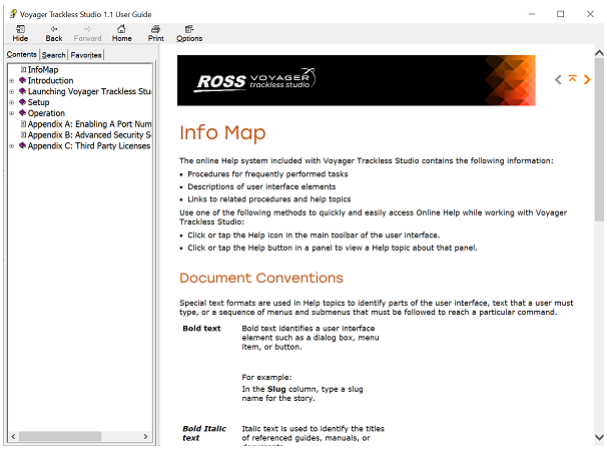
2. To convert the **Trackless Project Frame Rate** to match the **Voyager Project Frame Rate**, select **Convert**.

   See Production Control > Camera Presets > Set the Duration for a camera move for more information.

Help

The **Help** menu contains two options, the **Voyager Trackless User Guide** and the **About Voyager Trackless** screen.

- Select the **Voyager Trackless User Guide** button to open a new window and view the documentation for Voyager Trackless.



Voyager Trackless User Guide Online Help

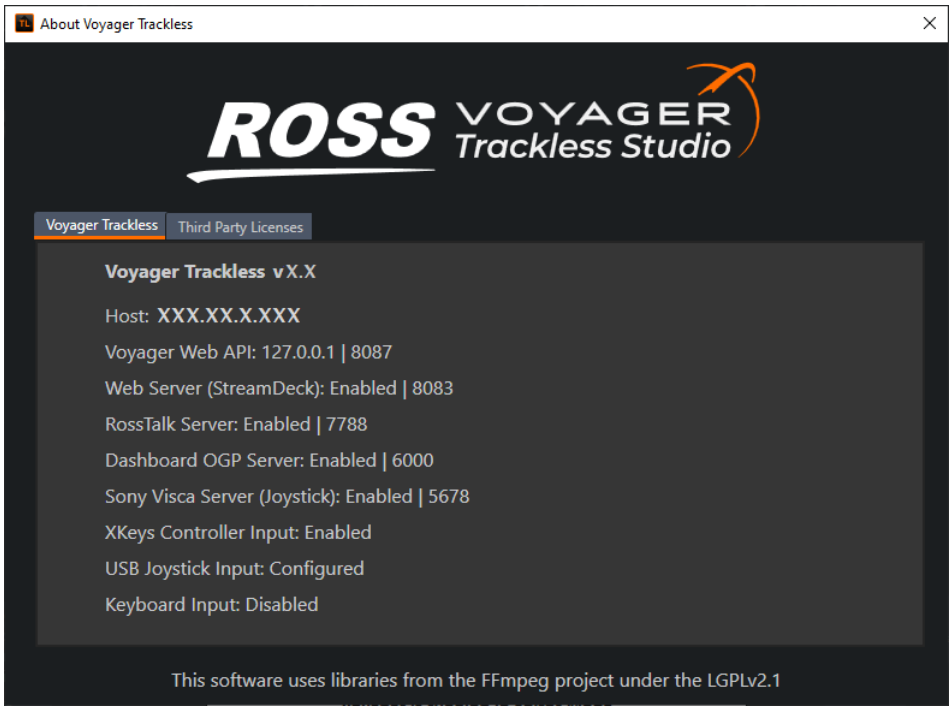
- Select the **About Voyager Trackless** button to view the **About** page:

  - **Voyager Trackless**

    This section provides information about Voyager Trackless Studio, such as the version, host IP address and enabled controllers and servers.

  - **Third Party Licenses**

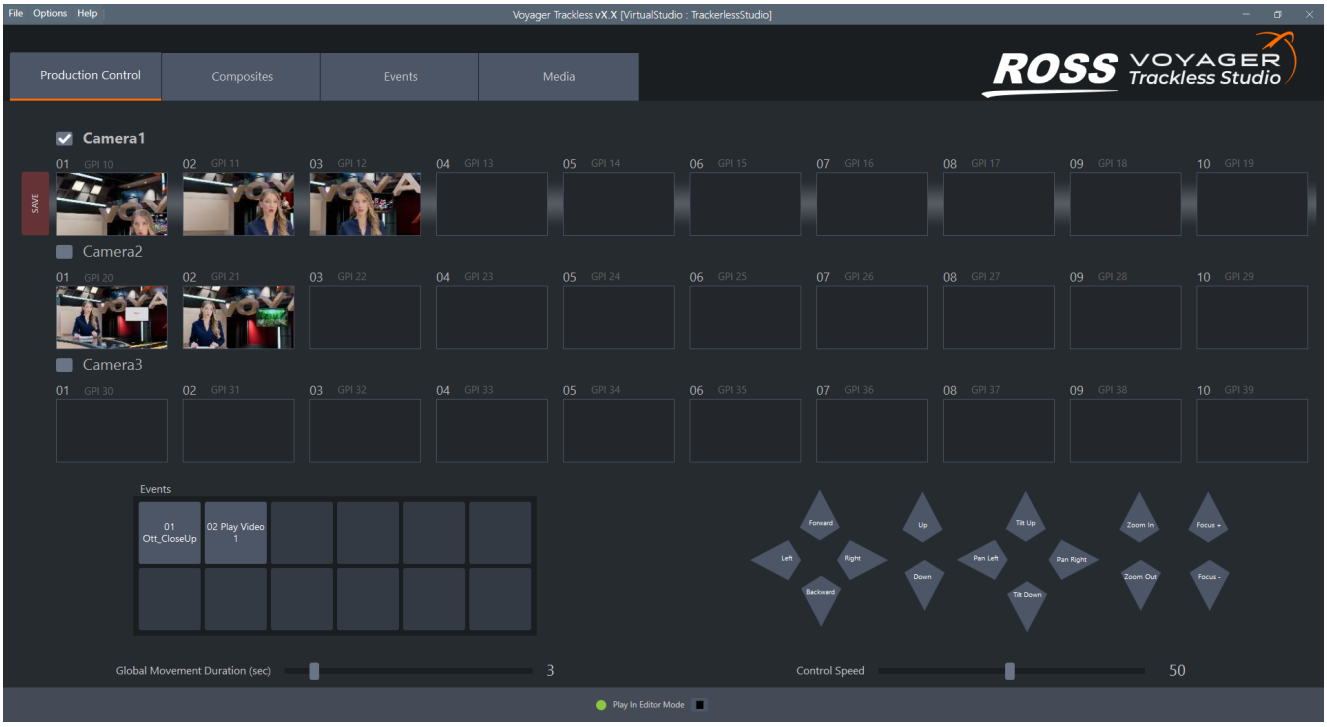
    This section provides a list of the third-party licenses and details for each.



Voyager Trackless Studio Help Menu

Operation

This section describes the Voyager Trackless Studio interface and its functions.



Voyager Trackless UI

This chapter covers the following topics:

Production Control

Create camera presets and display events from the **Production Control** panel. **Events** are added and deleted through the **Events** tab. See Events for more information.

Camera Presets

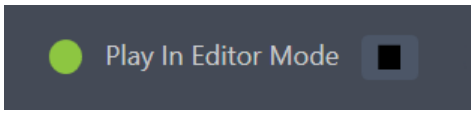
Events

To access **Production Control**, Voyager needs to be in **Play in Editor (PIE)** mode.

To put Voyager in PIE mode:

- Select **Play** in Voyager — or select the **Play** button in the bottom bar of Voyager Trackless Studio.

  A green indicator will display in the bottom task bar of Voyager Trackless Studio when Voyager is in **PIE** mode.



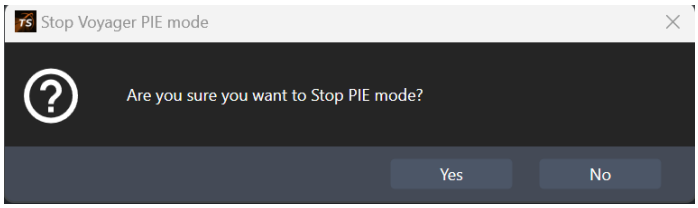
Play In Editor Mode

To stop PIE mode:

- Select **Stop** in Voyager — or select the **Stop** button in the bottom bar of Voyager Trackless Studio.

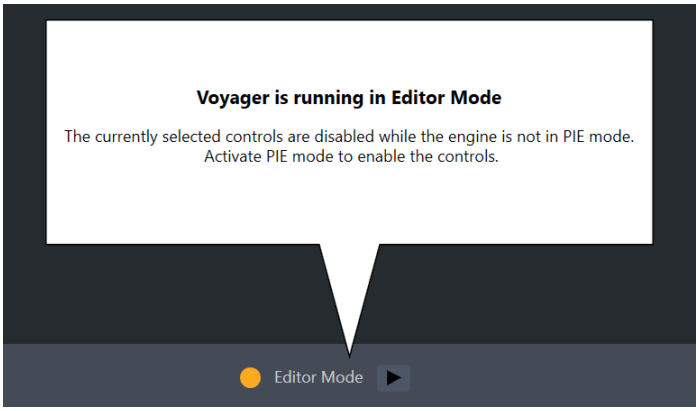
  If you select the **Stop** button in Voyager Trackless Studio, a dialog will appear to confirm that you want to stop **PIE** mode.

- Select **Yes** to continue to stop **PIE** mode.



Stop Voyager PIE mode dialog

An orange indicator will display at the bottom task bar of Voyager Trackless Studio indicating the Voyager engine is in **Editor** mode and the controls are currently disabled.



Editor Mode

Camera Presets

In the **Production Control** panel, you can add camera presets, allowing you to move from one view to another with the same camera or switch between cameras. You can also set specific intervals over which a single camera moves from one preset to another. See the following procedures for instructions:

Add a camera preset

Refresh the list of cameras

Delete a preset

Switch between cameras

Move from one preset to another with the same camera

Set the duration for a camera move

Override the duration for a camera move one time

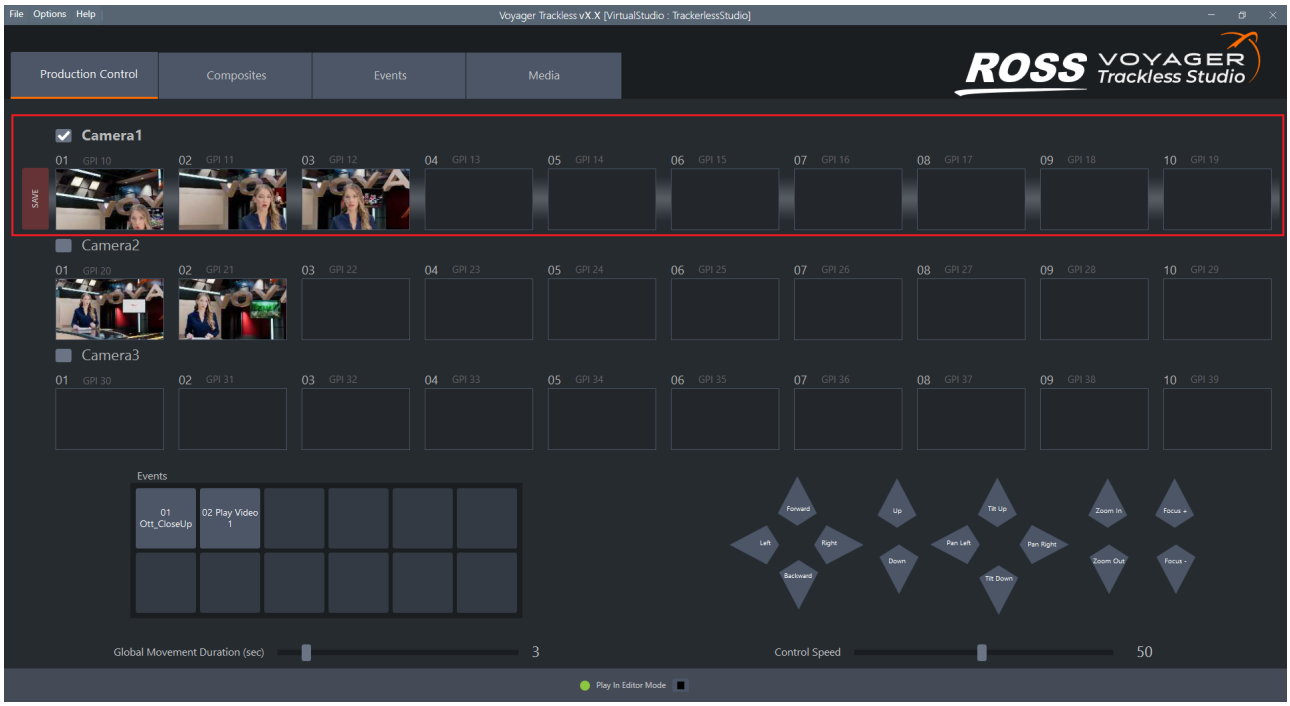
Revert to the Global Duration one time

Overwrite or update an existing preset.

To add a camera preset:

1. Select **Production Control**.
2. Select a camera.

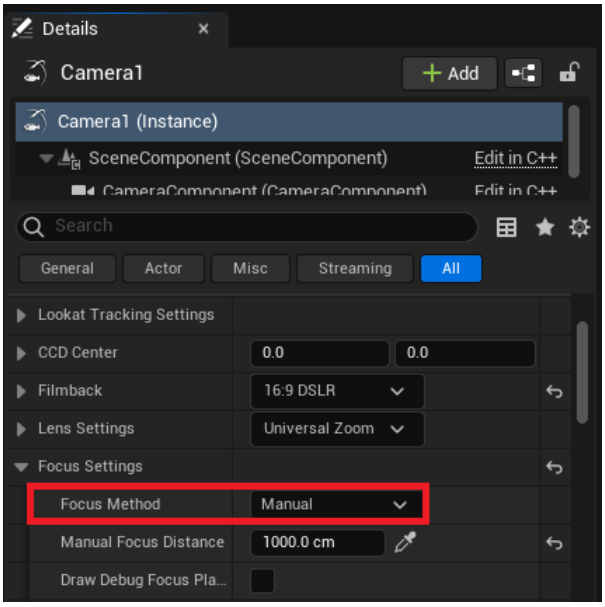
   The selected camera row will display with a highlighted background.



Production Control - Camera Presets

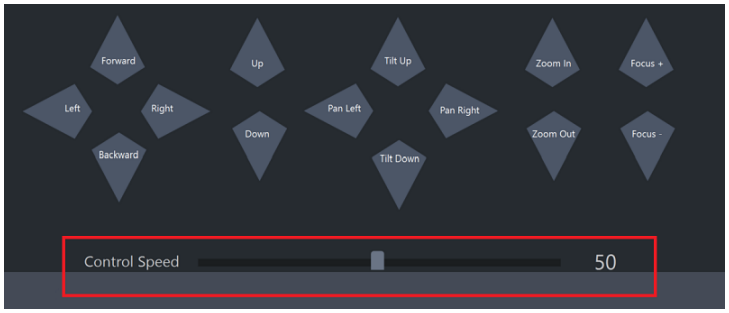
3. Adjust the camera view using the controls found at the bottom-right of the **Production Control** panel.
   - **Forward** — use this control to move the camera forward along the X-axis.
   - **Backward** — use this control to move the camera backward along the X-axis.
   - **Left** — use this control to move the camera left along the Y-axis.
   - **Right** — use this control to move the camera right along the Y-axis.
   - **Up** — use this control to move the camera up along the Z-axis.
   - **Down** — use this control to move the camera down along the Z-axis.
   - **Tilt Up** — use this control to rotate the camera upward.
   - **Tilt Down** — use this control to rotate the camera down.
   - **Pan Right** — use this control to rotate the camera to the right.
   - **Pan Left** — use this control to rotate the camera to the left.
   - **Zoom In** — use this control to magnify the field of view.
   - **Zoom Out** — use this control to decrease the field of view.
   - **Focus +** — use this control to increase the focal distance of the camera.
   - **Focus -** — use this control to decrease the focal distance of the camera.

     ★To use the **Focus** control, the Voyager Camera **Focus Method** in Voyager needs to be set to **Manual**.



Voyager Camera Focus Method

4. Use the **Control Speed** slider, located beneath the **Camera Controls**, to adjust the speed of the controls.



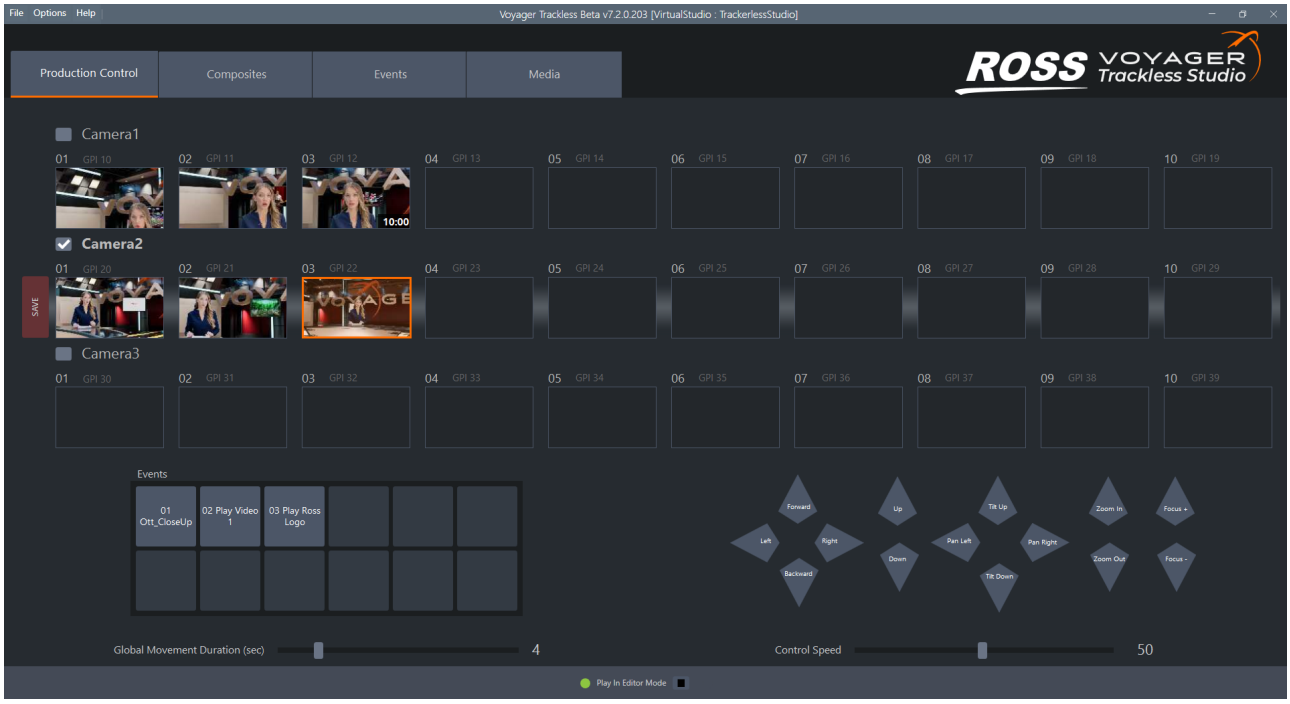
Control Speed Slider

5. View the **Voyager** engine output to review the camera position.

Camera View Preview

6. Select the **Save** button to the left of the camera row thumbnails.
7. Select a thumbnail, **01 – 10**.

The current camera view will be saved as a preset.



Production Control - Camera Preset Added

To refresh the list of cameras:

1. Right-click in the **Camera Presets** section.
2. From the context menu, select **Refresh Available Cameras**.

   If a new camera is added or removed from the Voyager scene, refreshing the cameras in Voyager Trackless Studio will detect these changes.

To delete a preset:

1. Right-click a preset.
2. From the context menu, select **Delete Preset**.

   The preset has been deleted.

To switch between cameras:

1. Select a camera preset in one camera row.

   Selecting a different camera name/checkbox will also switch the camera view.

2. Select a camera preset in a different camera row.

   The camera will perform a **CUT** transition between the current camera preset and the target camera preset.

To move between camera presets for the same camera:

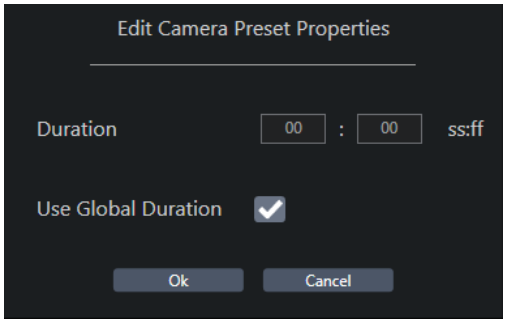
- Select a target camera preset in the current camera row.

  The camera will perform a smooth interpolated animation from its current position, rotation, zoom and focus, to the selected target preset, over the time set in the **Global Movement Duration** slider.

To set the duration for a camera move:

1. Right-click the target camera preset, and select **Edit Preset**.

   The **Edit Camera Preset Properties** dialog opens.

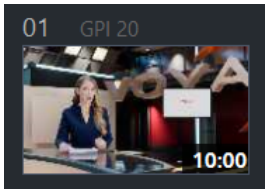


   Edit Camera Preset Properties

2. In the **Edit Camera Preset Properties** dialog, clear the **Use Global Duration** checkbox.
3. Then, in the **Duration** fields, enter the number of seconds (first field) and frames (second field) over which the move should take place.

   Entering **0** in both fields will cause the camera to "snap to" the target camera preset.

   The camera preset will display the set duration in the bottom-right corner.



   Camera Preset - Duration Timestamp

To override a set duration one time:

- Right-click the target camera preset and from the context menu, select **Move To Shot Using > Snap To**.

  For that time only, the camera view will switch instantly (**CUT**) to the target camera preset.

To revert to the Global Duration one time:

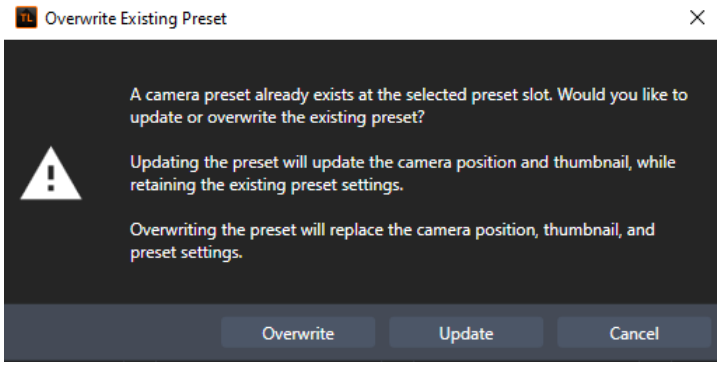
- Right-click the target camera preset and from the context menu, select **Move To Shot Using > Global Duration**.

  For that time only, the camera view will switch to the target camera preset in the number of seconds set in the **Global Movement Duration** slider.

To overwrite or update an existing preset:

1. Select a camera preset.
2. Change the camera position and/or duration settings as necessary.
3. Select the **Save** button.
4. Select the camera preset again.

   A confirmation dialog opens asking if you want to overwrite the preset or update it.



Overwrite or Update Existing Preset

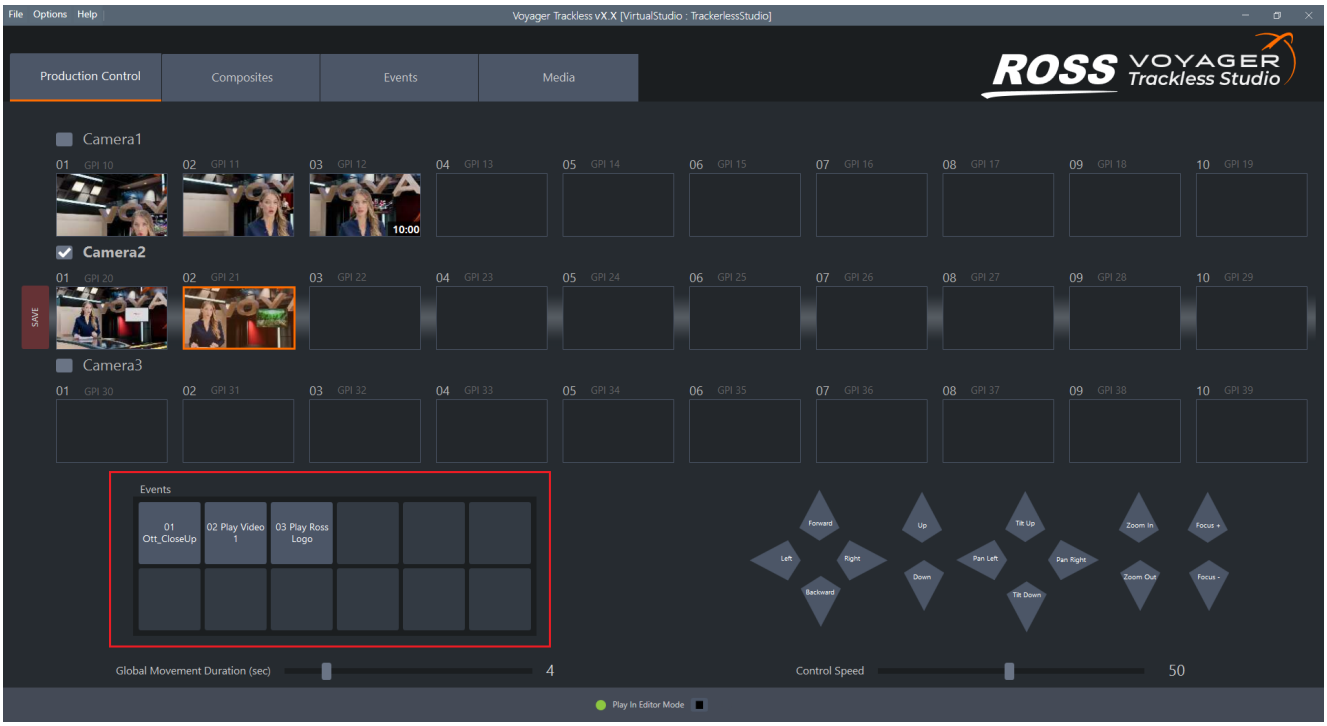
5. Select **Overwrite** to replace the camera position, thumbnail, and duration settings with the new camera position, thumbnail, and duration settings.

   OR

   Select **Update** to replace only the camera position and thumbnail, while retaining the existing duration settings.

Events

The **Events** panel is at the bottom-left on the **Production Control** panel. This panel displays any events added in the Events tab. The added events will appear in the same order in the **Events** panel and in any external device used to operate Voyager Trackless Studio.



Production Control - Events

To trigger an event:

- Select a thumbnail in the **Events** panel to trigger the event.

Composites

This panel is intended to make adjustments to the **Internal Chroma Keyer**.

Cropping and Feathering effects are supported when using an **External Chroma Keyer**.

The **Composites** tab includes the following:

Global Actions

General Settings

Alpha Settings

Color Grading Settings

Advanced Settings

Global Actions

The global action buttons, located beneath the **Chroma Key Settings**, impact all the settings. Use these buttons after you have configured the **Chroma Key** settings.

To configure global actions:

- Select **Reset to Previous** to reset the current composition's **Chroma Key** settings to the last saved configuration.

  In the confirmation dialog select **YES** to reset the **Chroma Key** settings.
- Select **Import Properties** to open a file dialog and load a **Chroma Key** settings file (*.ckp) to the current project. This will replace the settings for the currently selected composite only.
- Select **Export Properties** to open a file dialog and save the **Chroma Key** settings to a local file (*.ckp). This will export the settings for the currently selected composite only.
- Select **Refresh From Voyager** to retrieve the current **Chroma Key** properties inputted from the Voyager engine.
- Select **Reset to Defaults** to restore the **Chroma Key** configuration to the initial settings retrieved from the Voyager project.

General Settings

Use the **General** section to make adjustments to the **Key Color**, **Plane Crop**, and **Feather Sizing** of the selected composite plane. The available settings depend on whether an internal key or an external key is being used in the Voyager project.

If an internal key is being used, all settings are enabled and can be modified.

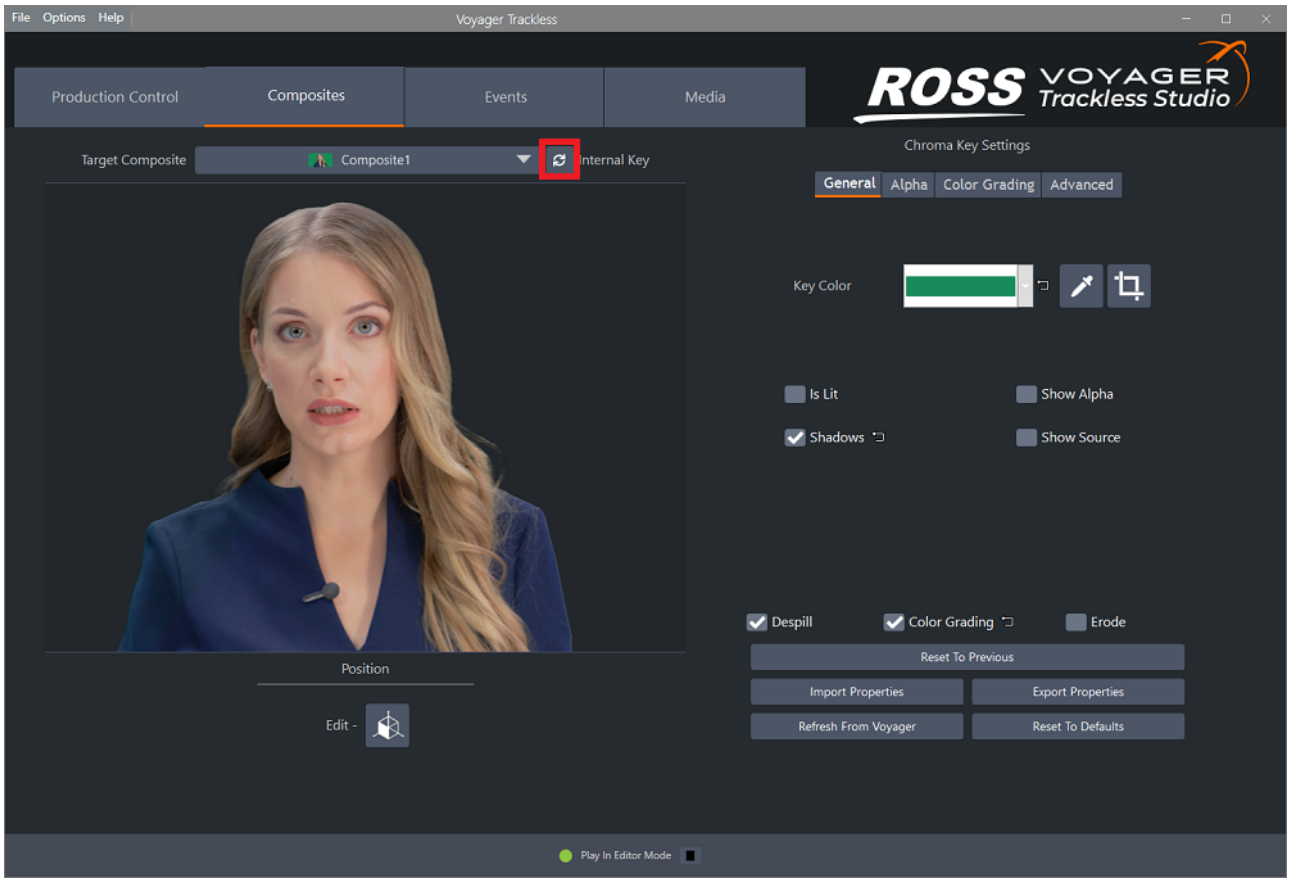
If an external key is being used, the following settings are enabled and can be modifed:

- Is Lit
- Shadows
- Cropping an Feathering
- Composite Transform (Position and Scale)

The key mode is indicated to the right of the **Target Composite** drop-down.

To configure the General settings:

1. Select the **Composites** tab.
2. Select the refresh button beside the **Target Composite** drop-down to ensure the list is up-to-date.



Composites - General Settings

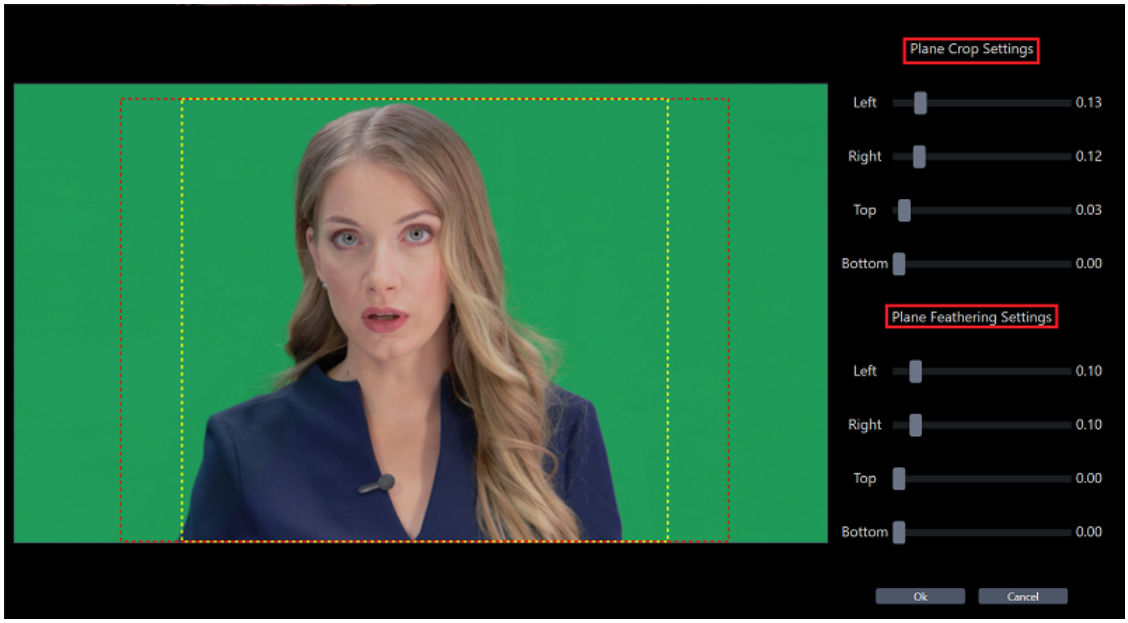
3. From the **Target Composite** drop-down, select the composite to be configured.
4. Select the eyedropper tool and in the preview image, select the color you want to use for the key.

   Alternatively, select the **Key Color** drop-down to open the color picker. and use the slider bars or enter values in the **RGB** fields to adjust the **Key Color**.
5. Select the **Crop** icon to open the **Plane Cropping** and **Plane Feathering Settings** window and use the sliders to adjust the cropping and feathering of the plane:

   Cropping discards areas of the composite, making them fully transparent. The **Red** rectangle is a visual representation of the cropped area.

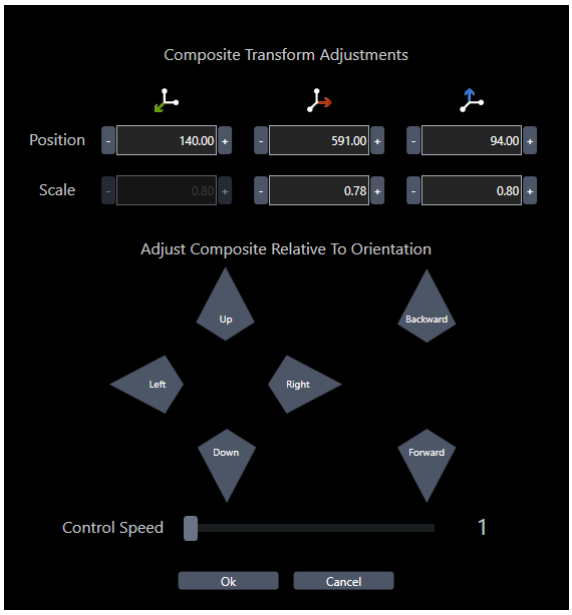
   Feathering smooths the transparency of the borders of the image with an opacity gradient, from fully opaque (100% opacity) to fully transparent (0% opacity).

   The space between the yellow rectangle and the red rectangle is the area that will be feathered.



Composite - Plane Crop and Plane Feathering

6. Select the **Scale** icon beneath the **Composite** image to open the **Composite Transform Adjustments** window and fine-tune the position and scale of the composite plane.



Composite Transform Adjustments

- Use the **Position +** and - buttons (or enter a value) to move the composite plane forward, backward, left, right, up and down relative to its position in the World Outliner.
- Use the **Scale +** and **-** buttons (or enter a value) to adjust the height and width of the composite plane.
- Alternatively, you can use the **Up/Down**, **Left/Right**, and **Backward/Forward** arrows to adjust the position of the composite plane relative to its current orientation.
- Move the **Control Speed** slider to adjust the speed of the adjustments when using the arrows.

7. Select **Ok** to save your settings or **Cancel** to revert to the previous settings.

To reset individual settings to their default value (the value retrieved from the Voyager project):

- Select the curved arrow icon next to the property you want to reset.

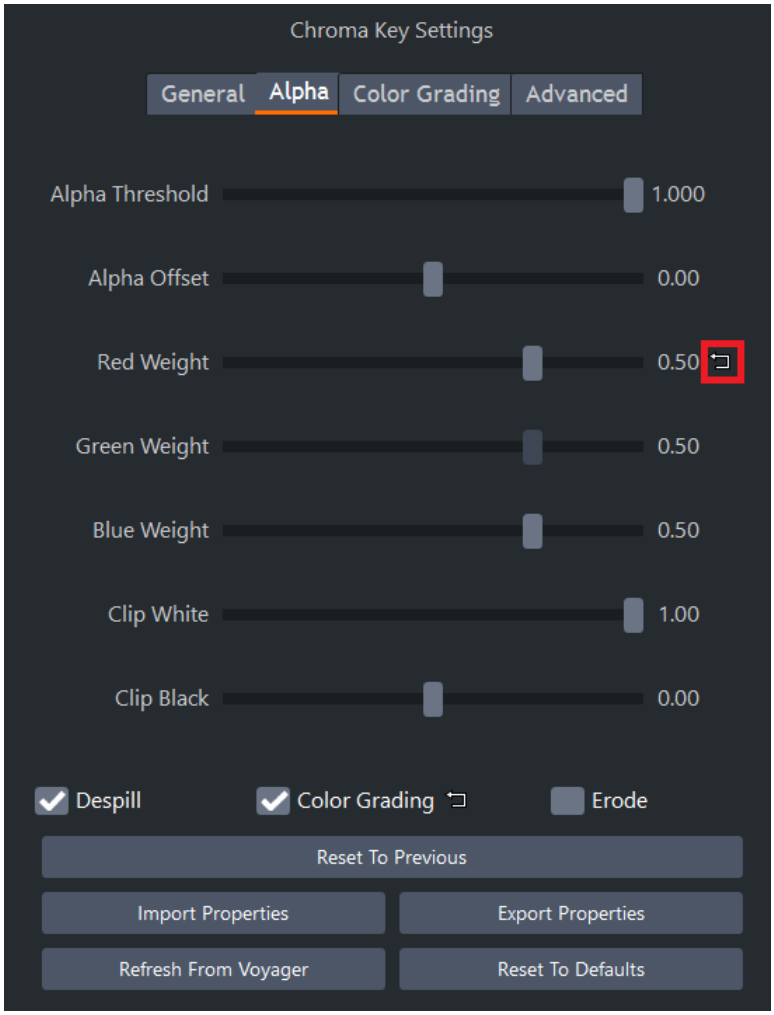
  The icon is displayed next to settings that have been modified from their default state.
- Alternatively select the **Reset to Defaults** button to reset all settings to their default states.

Alpha Settings

Use the sliders in the **Alpha** tab to fine tune the **Chroma Keyer** parameters and adjust the translucency of the different color levels.

- To reset individual settings to their default value select the curved arrow icon next to the property you want to reset. The icon is displayed next to settings that have been modified from their default state.

  Alternatively select the **Reset to Defaults** button to reset all settings to their default states (the initial settings retrieved from the Voyager project).



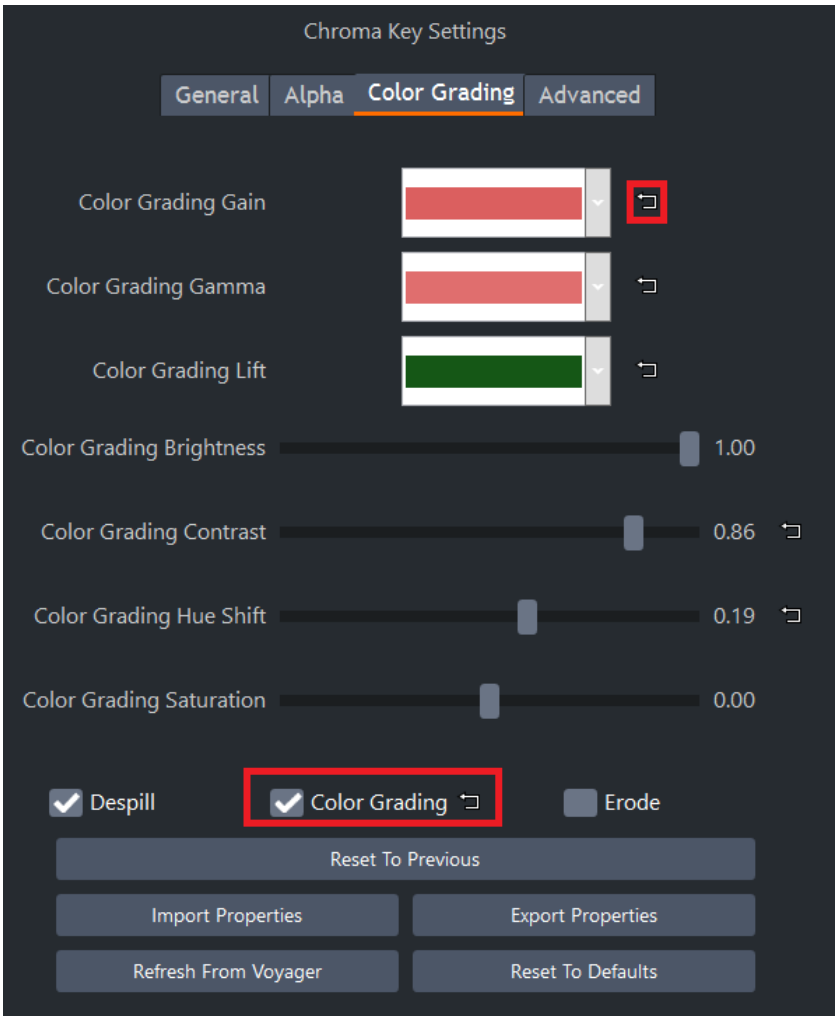
Composites - Alpha Settings

Color Grading Settings

Use the **Color Grading** tab as a post process effect to fine tune the color and contrast levels of the resulting composite image once the **Chroma Keyer** is applied.

1. Select the **Color Grading** checkbox to view the adjustments made in the **Target Composite** window.
2. To reset individual settings to their default value select the curved arrow icon next to the property you want to reset. The icon is displayed next to settings that have been modified from their default state.

   Alternatively select the **Reset to Defaults** button to reset all settings to their default states (the initial settings retrieved from the Voyager project).



Composites - Color Grading Settings

Advanced Settings

Use the **Advanced** tab to make adjustments to the **Despill** and **Erode** settings.

The **Despill** settings allow you to reduce any color spill from the background color that affects the resulting image. Despill reduces the saturation of the spill to a gray scale. The **Erode** settings allow you to fine tune the boundaries of the keyed areas and shrink the resulting output, removing any artifacts around the borders of the talent.

- Select the **Despill** and **Erode** checkboxes to view the adjustments made in the **Target Composite** window.
- To reset individual settings to their default value select the curved arrow icon next to the property you want to reset. The icon is displayed next to settings that have been modified from their default state.

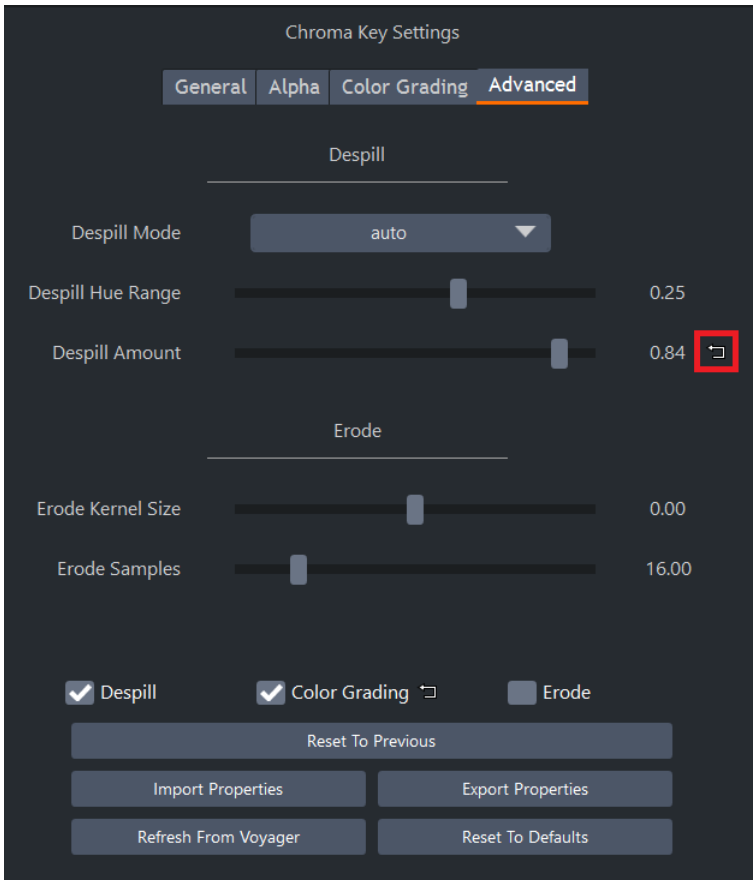
  Alternatively select the **Reset to Defaults** button to reset all settings to their default states.

To configure Despill settings:

1. From the **Despill Mode** drop-down select either **Auto** or **Hue**.
2. Use the sliders to adjust the **Despill Hue Range** and **Despill Amount**.

To configure Erode settings:

1. Use the **Erode Kernel Size** slider to adjust the kernel size.
2. Use the **Erode Sample** slider to adjust the sample size.



Composites - Advanced Settings

Events

In the **Events** tab, you can create events using **Blueprint Nodes** or **Level Sequences** that can be played during a live show.

Event names are used as a reference when events are listed in the **Production Control** tab, as well as when used with XKeys, RossTalk, DashBoard, VISCA, and Web Servers.

Once events have been added, they can be rearranged by dragging and dropping.

The following topics are discussed in this section:

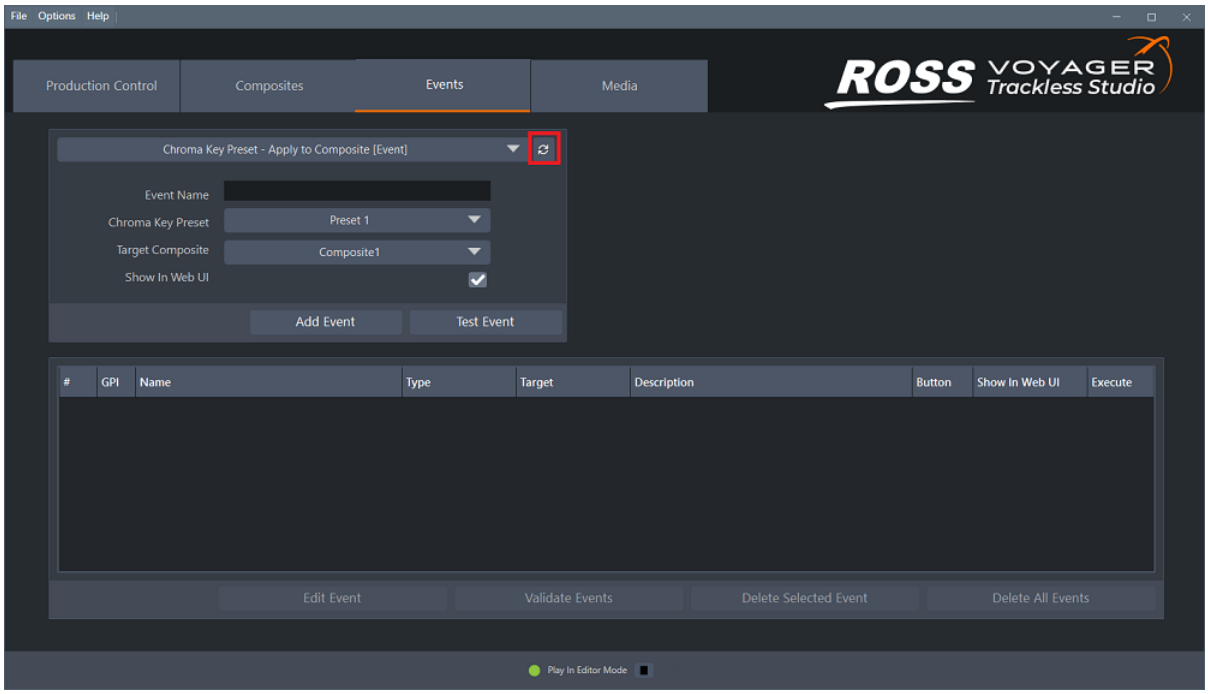
Configuring Blueprint Node Events

Use **Blueprint Node** events to launch visually scripted additions to your project (graphics, animations, etc.) that were created within the **Level Blueprint** in **Voyager**.

★Once you have added a **Blueprint Node** event to your events list, if you change the name of the **Blueprint Node** in Voyager, the event will no longer work in Voyager Trackless. If you want to change the **Blueprint Node** name in Voyager, you will need to create a new event using that **Blueprint Node** in Voyager Trackless.

To configure a Blueprint Node event:

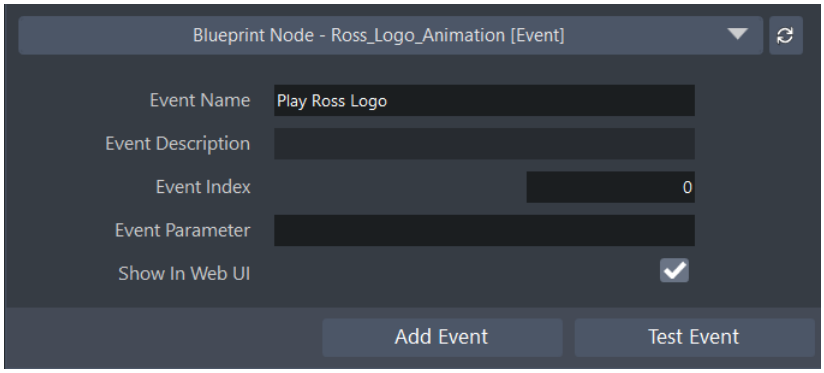
1. Select the **Events** tab.
2. In the **Event** editor, select the **Refresh** button to make sure all current events are retrieved from Voyager.



Events Tab

3. From the **Events** drop-down, select the **Blueprint Node** event you want to trigger.

4. Enter the **Event** information as follows:

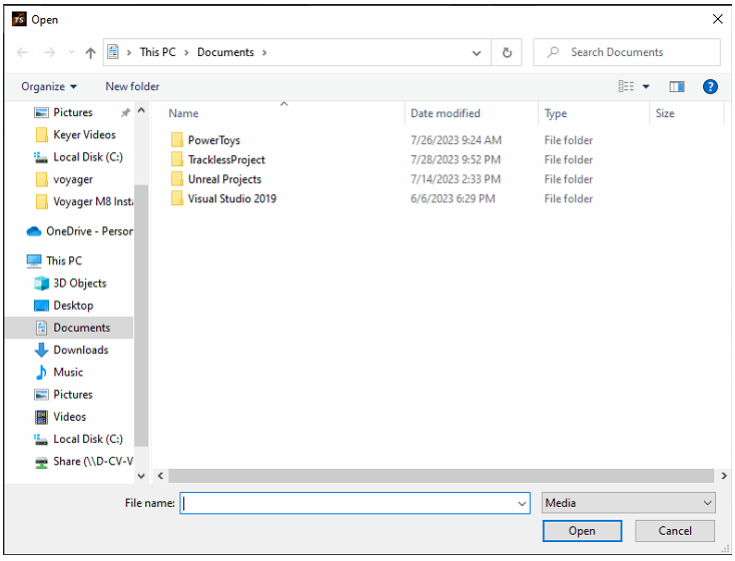


Event Information

- In the **Event Name** field, enter a name for the event.
- In the **Event Description** field, enter a description for the event from the Blueprints screen in Voyager (optional).
- In the **Event Index** field, enter a number to indicate which of the event options will be triggered (if there are multiple options).
- In the **Event Parameter** field, enter the text that will be displayed when the event is triggered.
- If the event contains a media file, select the **File Folder** icon to the right of the **Event Parameter** field to open a file explorer window.

  Select the media content you wish to use as the **Event Parameter**.

  Alternatively you can create **Media Events** in the **Media** tab, for information see Media.



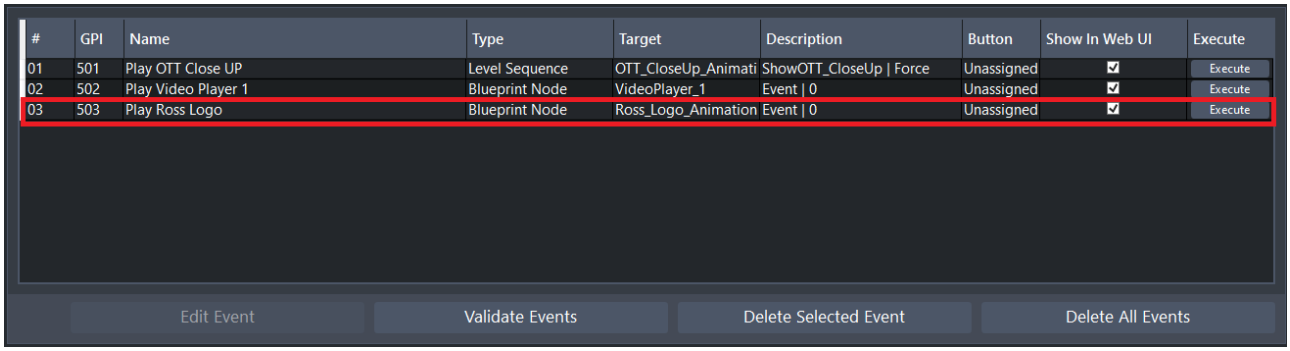
Event Parameter File Explorer Window

- Select the **Show in Web UI** checkbox to make the event visible on the **Web User Interface**.

5. Select **Test Event** to make sure the event is working properly in the **Trackless Preview** window.

6. Select **Add Event**.

   The **Blueprint Node** event is added to the event list and appears in the **Event** panel in the **Production Control** tab.



Event Added

Configuring Level Sequence Events

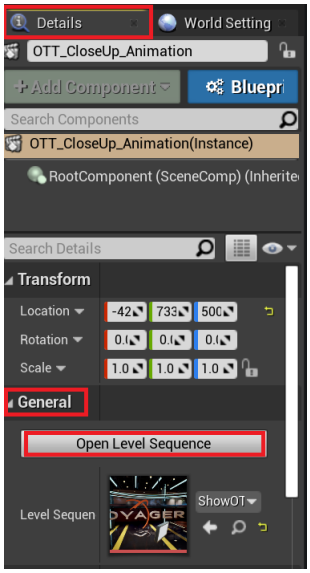
Use **Level Sequence** node events to add animations, key frames or graphics to your project.

Level Sequence node events allow you to play, pause, and stop tracks created within the **Level Blueprint** in Voyager.

★You need to have published the **Level Sequence Actors** in Voyager using the **Template Links** panel, in order to control them from Voyager Trackless Studio.

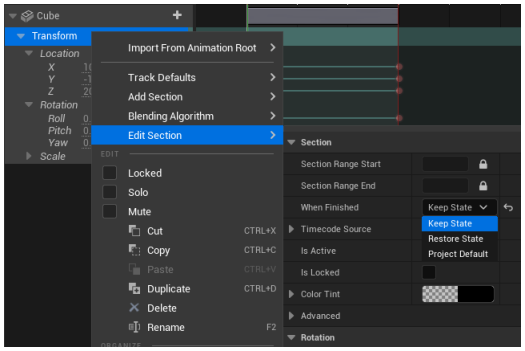
To configure a Level Sequence Node event in Voyager:

1. In Voyager, in the **Outliner**, select the **Level Sequence Actor** for the event you want to trigger in Voyager Trackless Studio.



Open Level Sequence

2. In **Details**, select **All**.
3. In the **General** section, select **Open Level Sequence**.
4. In the **Sequencer**, expand the **Level Sequence Actor**.
5. Right-click **Transform** and select **Edit Section**.



Sequence Settings in Voyager

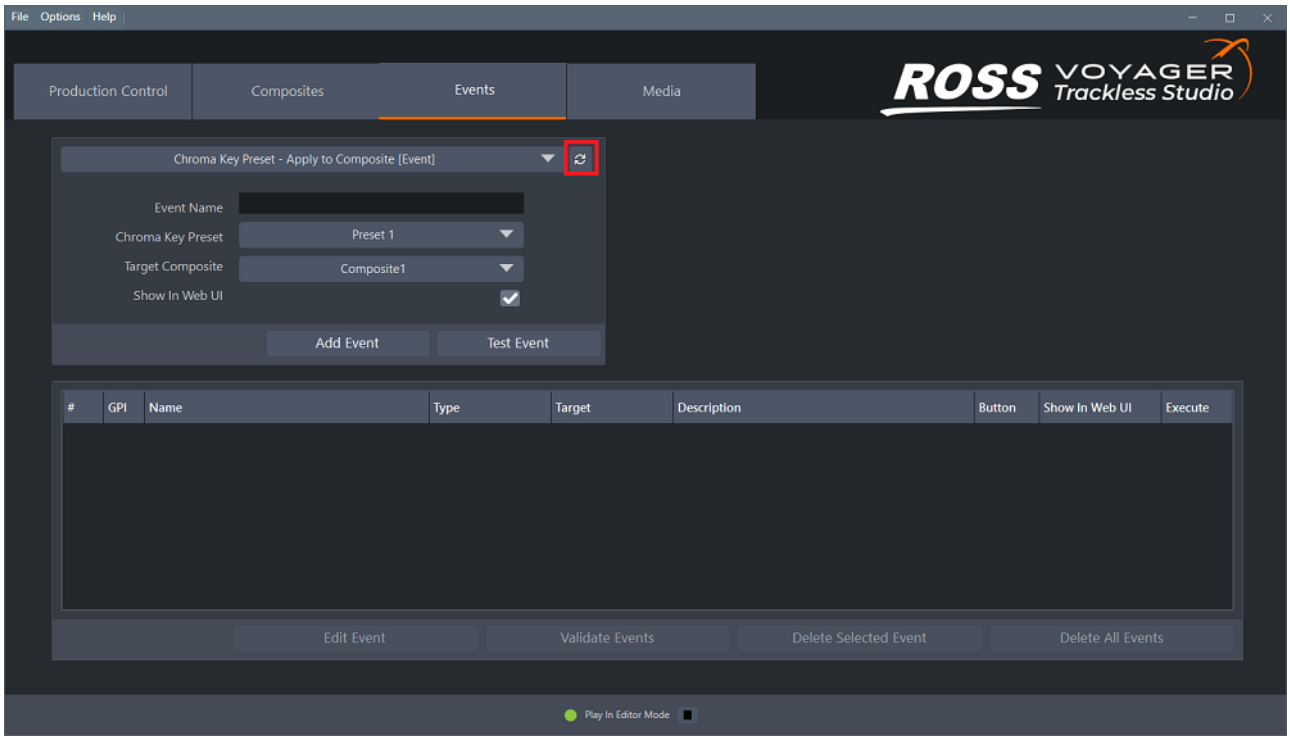
6. In **Section > When Finished**, select **Keep State** from the drop-down.

   Keep State will make the animation play until the end and then hold on the last frame of the animation (preventing looping).

7. Select **Save**.

To configure a Level Sequence Event in Voyager Trackless Studio:

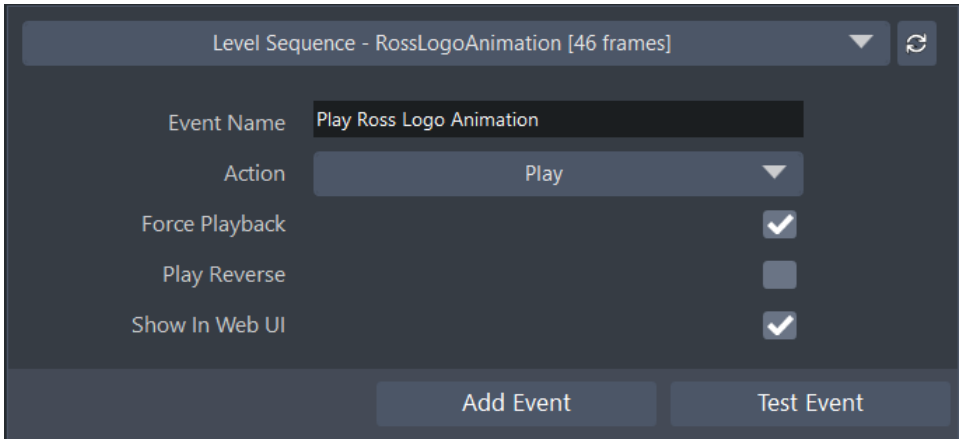
1. Select the **Events** tab.
2. Select the **Refresh** button to make sure all current events are retrieved from Voyager.



Events Tab

3. From the **Events** drop-down, select the **Level Sequence** event.

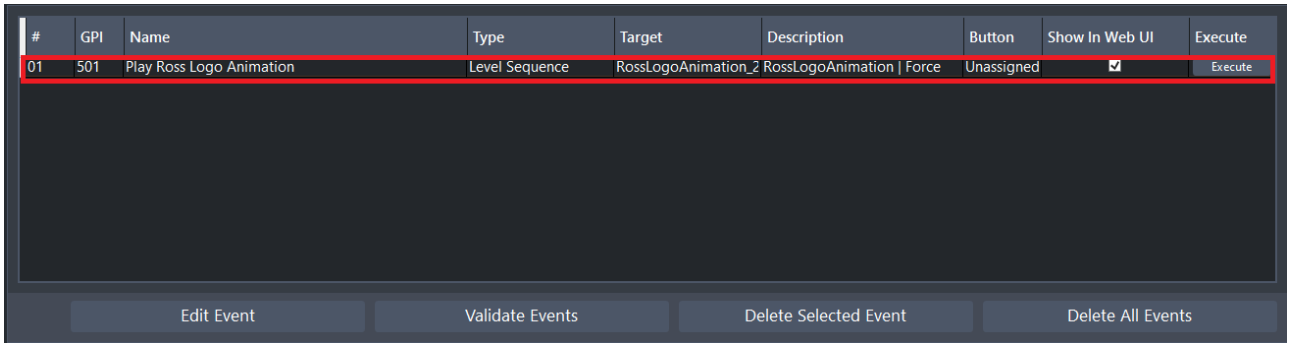
   The **Action** drop-down is added.
4. In the **Event Name** field, enter a name for the event.
5. From the **Action** drop-down, select one of the following options: **Play**, **Pause**, **Stop**.



Level Sequence Event - Details

6. If **Play** is selected, choose whether or not to select **Force Playback** and **Play Reverse**.
   - If **Force Playback** is deselected:
     - The event plays forward only if the current animation frame is the first frame.
     - The event plays in reverse only if the current animation frame is the last frame.
   - If **Play Reverse** is selected:
     - The animation plays in reverse.
   - If **Play Reverse** is deselected:
     - The animation plays forward.
7. Select the **Show in Web UI** checkbox to have the event displayed in the **Web User Interface**.
8. Select **Test Event** to make sure it is working correctly.
9. Select **Add Event**.

   The **Level Sequence** event is added to the event list and appears in the **Event** panel in the **Production Control** tab.



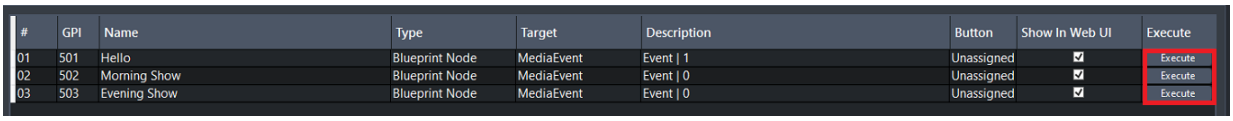
Event Options

You can execute selected events from either the **Events** tab or the **Events** panel in the **Production Control** tab.

Events can be edited, validated, deleted and duplicated from the **Events** tab.

To Execute an Event:

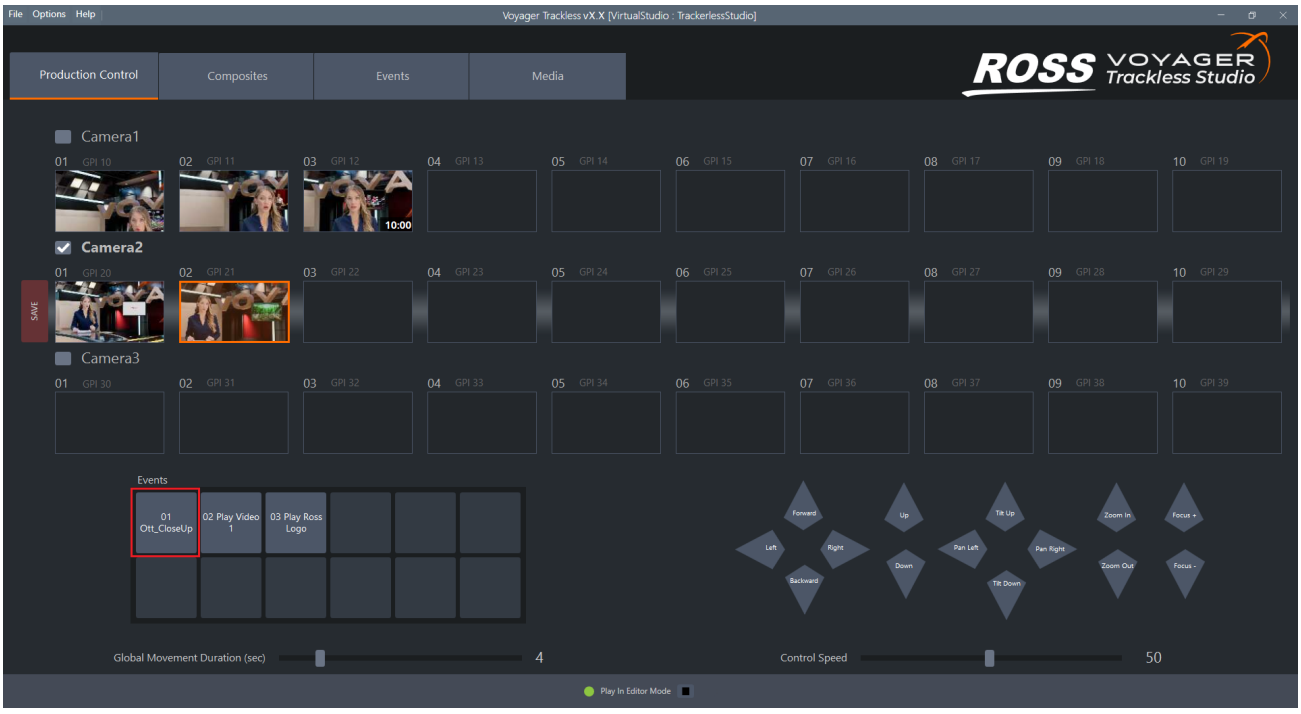
- In the **Events** tab, select the event you want to trigger and click **Execute**.



Executing Events from Event Tab

OR

- In the **Events** panel, select an event button.



Executing Events from Production Control Tab Panel

OR

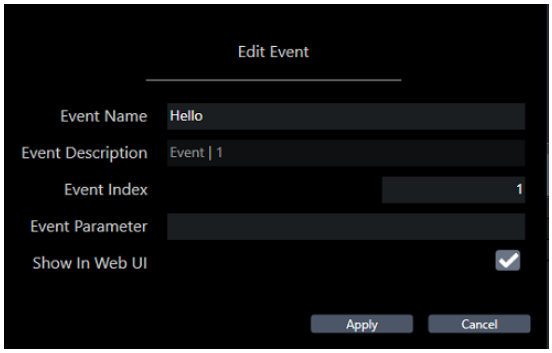
- Use the **Page Up** (or **Arrow Up**) key to move the focus to the first event and use the **Page Down** (or **Arrow Down**) key to execute the currently selected event and move the focus to the next event.

  The **Page Up/Down** or **Arrow Up/Down** keys must be configured in Options > Settings > Controllers to use them for executing events.

To Edit Events:

1. In the **Events** tab, from the list of events, select the event you want to edit and select **Edit Event**.

   The **Edit Event** window opens.



Edit Event Window

2. Make the adjustments and select **Apply**.

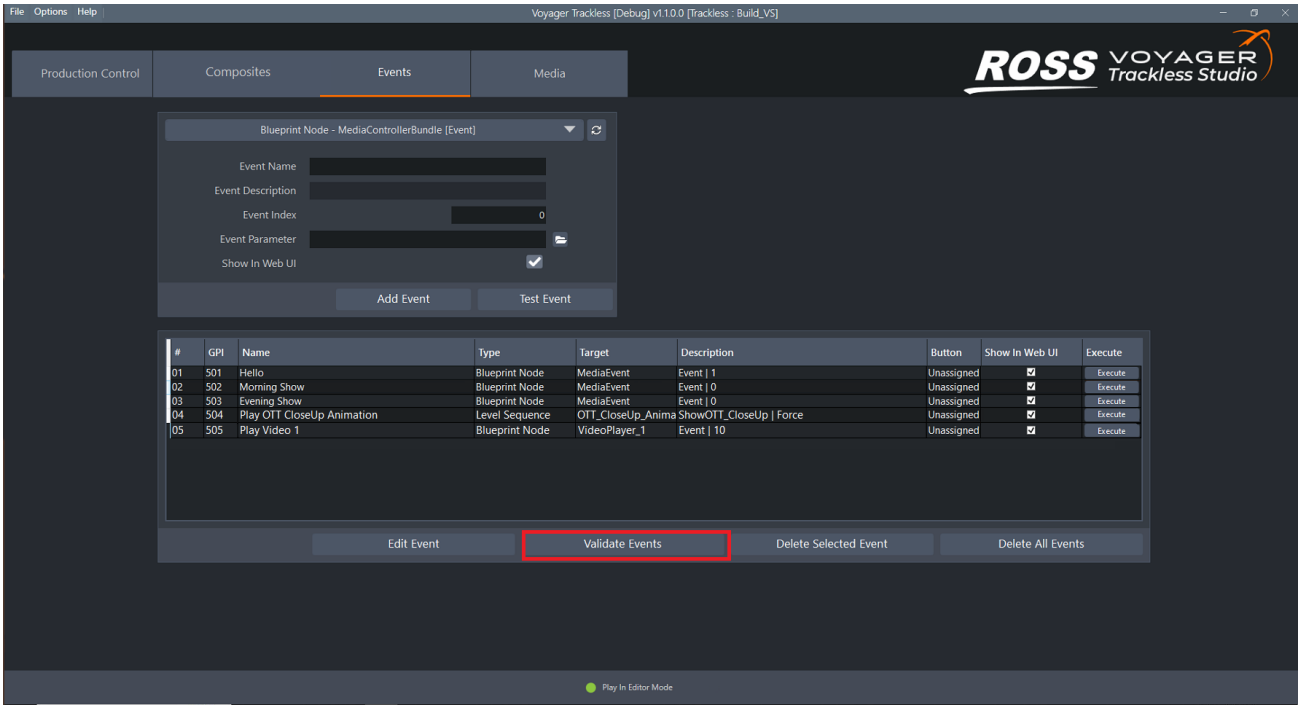
   ★Alternatively you can select the event from the list, right-click and select **Edit Event** to access the **Edit Event** window.

To Validate Events:

- In the **Events** tab, select the **Validate Events** button to refresh the events in the events panel.

  You may need to do this if you've deleted events in the **Events** tab, but they are still appearing in the **Events** panel in the **Production Control** tab.

  If an event no longer exists you have the option to delete the event from the table. If you do not delete the event, the event text will change to red to signal that the event is no longer valid.



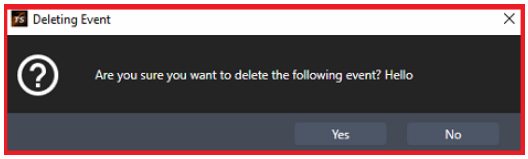
Validate Events

To delete events:

1. In the **Events** tab, from the list of events, select the event you want to delete and select **Delete Selected Event**.

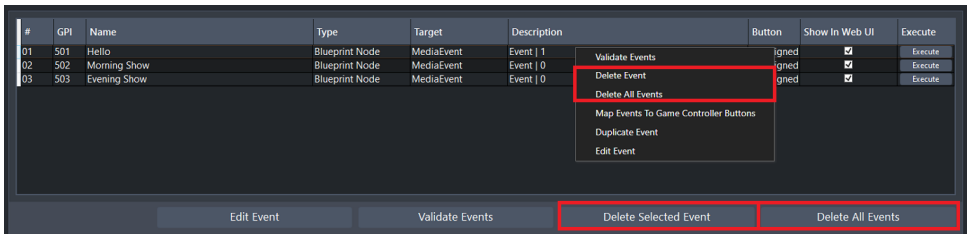
   Alternatively you can select the event you want to delete from the list, right-click and select **Delete Event**.

2. Delete all events by selecting the **Delete All Events** button or right-click and select **Delete All Events**.



Delete Events Confirmation

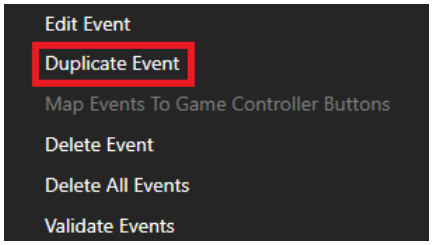
3. In the confirmation dialog, select **YES** to delete.



Deleting Events

To duplicate Events:

1. In the **Events** tab, from the list of events, select the event you want to duplicate.
2. Right-click on the event and select **Duplicate Event**.



The event is duplicated and the event name will be displayed with the suffix '**_copy**'.

Media

Use the **Media** tab to add thumbnails of available images and videos that can be applied to the **Media Targets** in Voyager.

Media Targets can be **Media Controller Actors** or **Voyager Event Execution Blueprint Nodes** with the **Flag** set to **Media.**

Use the **Media Content** pages to organize imported media files.

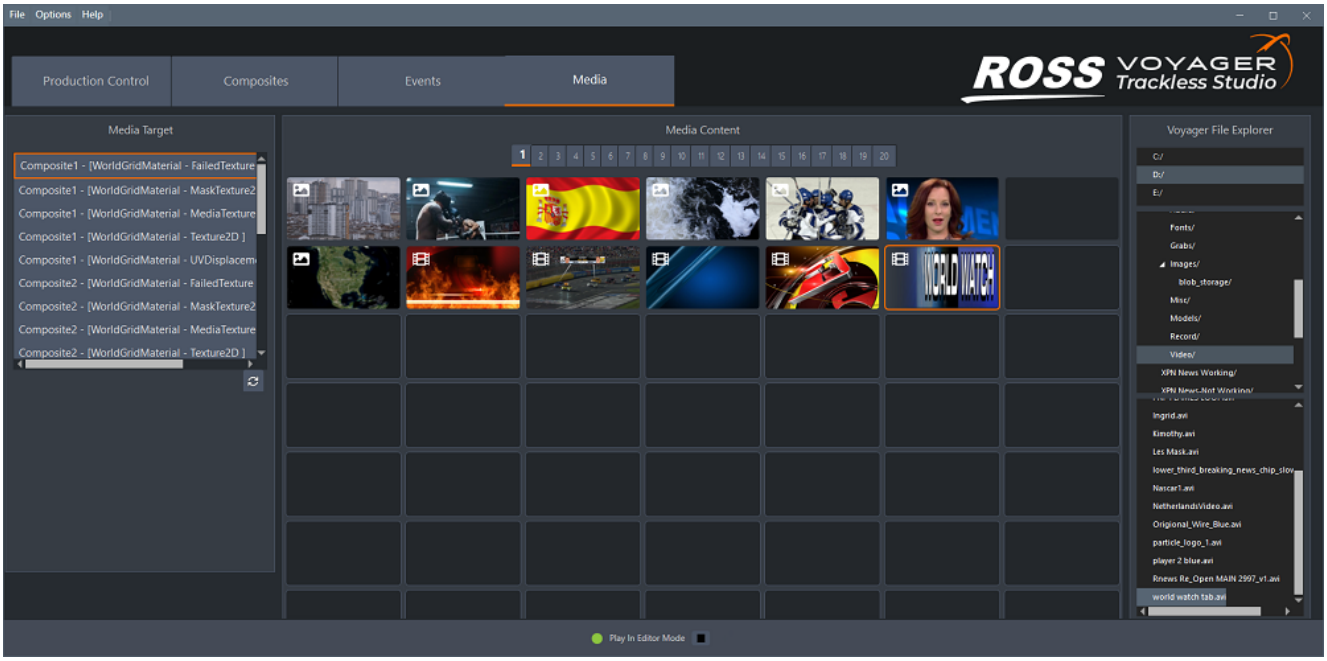
The following topics are discussed in this section

Media Targets

In the **Media** tab, the **Media Targets** section displays the list of elements that you can apply media files to.

Any regular actor in Voyager can be a target. You need to publish it in the **Template Links** window in Voyager and set it as a media target for it to appear in the **Media Targets** list.

★If you have multiple media targets listed you can select and assign different media files to each.



Media Tab - Media Targets

For information about using **Template Links** to publish Voyager actors, see the *Voyager User Guide*.

Material Texture Parameters

Since Voyager actors can have multiple material slots, you are able to apply an image or video to any of the target's material texture parameters, providing those parameters have been published in Voyager.

There are various types of materials that can be applied to a Voyager object. In order for you to be able to apply a video or image to the material, it needs to be a material texture parameter, such as the **TextureSampleParameter2D**. If the object you want to apply media to has a non-texture parameter, you will need to change it to a texture parameter.

Media Controller

You can add a **Media Controller** in Voyager and then use it as a **Media Target** in the **Media** tab in Voyager Trackless Studio to apply image and video files.

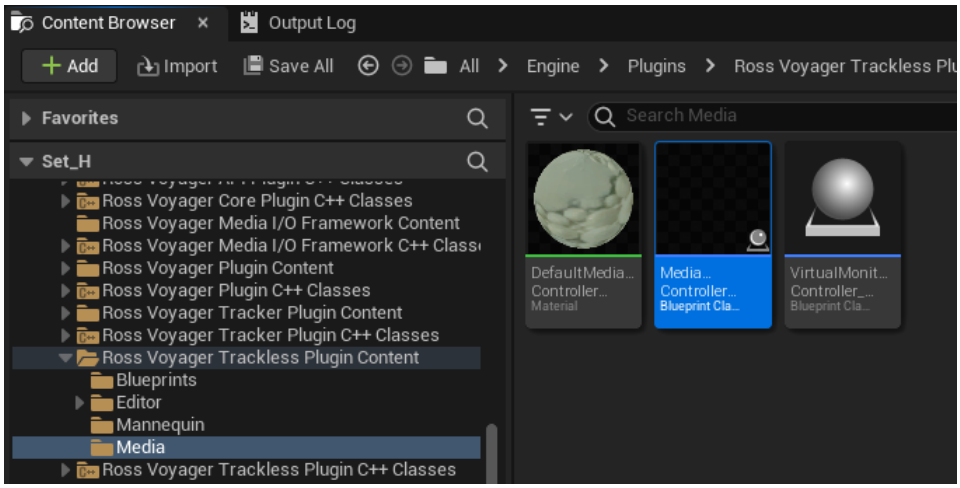
In order to play video files with the media controller, create a **Media Bundle Asset** in Voyager.

After adding a media controller, publish it in the **Template Links** window and set it as a media target.

For more information about template links, see the *Voyager User Guide*.

To add a Media Controller in Voyager:

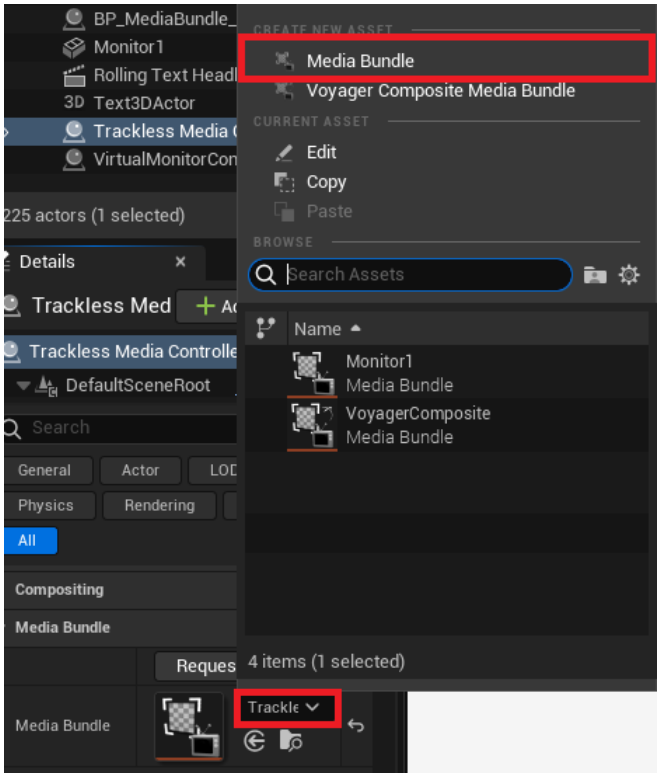
1. In Voyager, in the **Content Browser**, select the **Settings** icon in the top-right corner.
2. In the **Settings** menu, make sure that **Show Engine Content** and **Show Plugin Content** are selected.
3. In the **Content** tree on the left side of the **Content Browser**, go to **Engine > Plugins > Ross Voyager Trackless Plugin Content > Media**.
4. From the **Media** folder, drag the **MediaControllerBundle** into the scene and position it where you would like to play content.



Add MediaControllerBundle

5. In the **Outliner**, right-click the **MediaControllerBundle** and from the context menu, select **Edit > Rename** and give the **Controller** a name (e.g., TracklessMediaController).
6. With the **MediaControllerBundle** selected in the **Outliner**, in the **Details** tab, select **All** and scroll down to the **Media Bundle** section.

7. From the **Media Bundle** drop-down, select **Create New Asset > Media Bundle**.



Create New Media Bundle

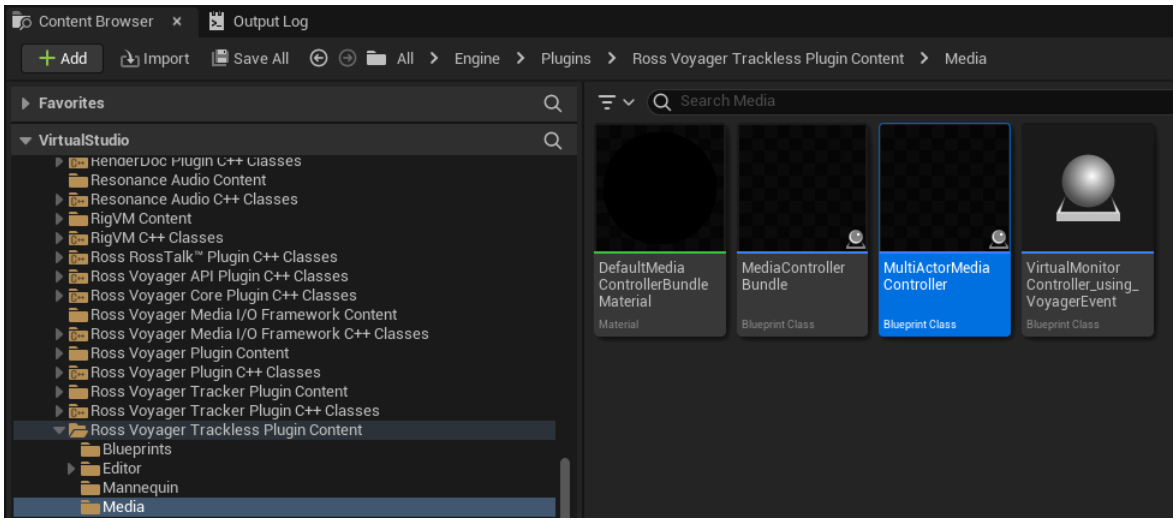
8. In the **Save Asset As** window, in the **Name** field, enter a name for the **Media Bundle** and select **Save**.
9. In the Voyager editor, select the **Save** icon.

Multi-Actor Media Controller

You can add a **Multi-Actor Media Controller** in Voyager and then use it to apply image and video files to multiple targets simultaneously.

To add a Multi-Actor Media Controller in Voyager:

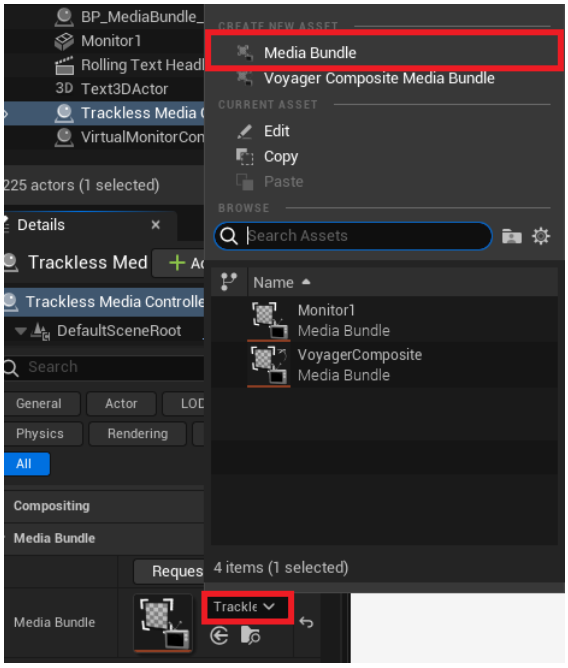
1. In Voyager, in the **Content Browser**, select the **Settings** icon in the top-right corner.
2. In the **Settings** menu, make sure **Show Engine Content** and **Show Plugin Content** are selected.
3. In the **Content** tree on the left side of the **Content Browser**, go to **Engine > Plugins > Ross Voyager Trackless Plugin Content > Media**.
4. From the **Media** folder, drag the **MultiActorMediaController** into the scene.



Media - Multi-Actor Media Controller

5. In the **Outliner**, right-click the **MultiActorMediaController** and from the context menu, select **Edit > Rename** and give the **Controller** a name (e.g., MultiMediaController).
6. With the **MultiActorMediaController** selected in the **Outliner**, in the **Details** tab, select **All** and scroll down to the **Media Bundle** section.

7. From the **Media Bundle** drop-down, select **Create New Asset > Media Bundle**.



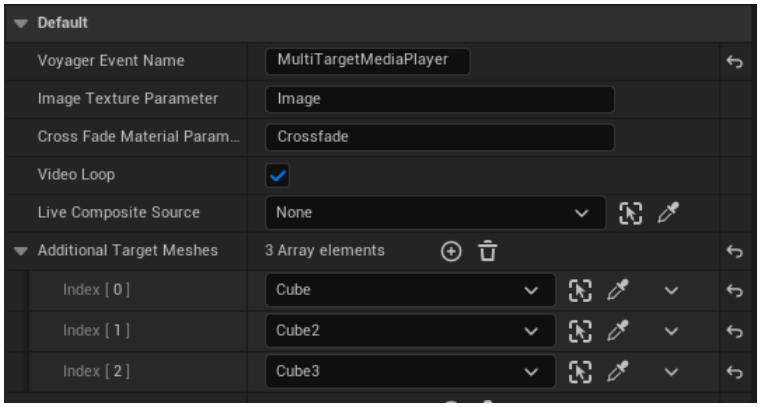
Create New Media Bundle

8. In the **Save Asset As** window, navigate to the folder in which you want to save the new media bundle, and in the **Name** field, enter a name for the **Media Bundle** and select **Save**.
9. In the Voyager editor, select the **Save** icon.

To add targets for the Multi-Actor Media Controller:

1. From the **Place Actors** section, select and drag the actors you wish to use as targets (e.g., cubes, planes, spheres) into the **Viewport**.
2. In the **Outliner**, select each actor you just added, then right-click and select **Edit > Rename** to give the actor a name.
3. With the **Multi-Actor Media Controller** selected in the **Outliner**, in the **Details** tab scroll down to the **Default** section.
4. Select the **+** icon beside **Additional Target Meshes** to add a mesh for each of the targets.

5. From the drop-down beside each mesh **Index**, select one of the targets you added in Step 1.

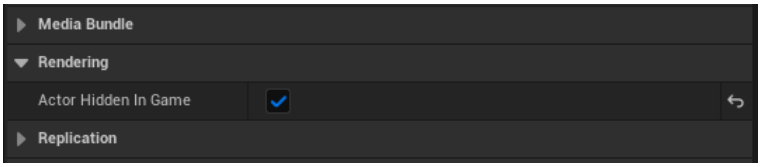


Media - Add Additional Meshes

The targets are now available to be used in events.

To hide the Multi-Actor Media Controller:

- If you only want to apply media to the target actors and not to the **Multi-Actor Media Controller** itself, in the **Details** tab, in the **Rendering** section, select the **Actor Hidden in Game** checkbox.



Media - Hide Multi-Actor Media Controller

Voyager File Explorer

The **Voyager File Explorer** allows you to browse the remote **Voyager Engine File** system and select **Media** files to use within the Voyager Trackless Studio project.

Thumbnail images will be generated for file paths that are accessible from both systems, **Voyager** and **Voyager Trackless Studio**. The recommended workflow is to have them on a shared network drive that has the same drive letter assigned on both systems.

To add media from the Voyager File Explorer:

1. In the **Media** tab from the **Voyager File Explorer** section select the drive that is connected to both **Voyager** and **Voyager Trackless Studio** from the first box.
2. In the second box, select the folder that contains the media files you want to import.
3. In the third box, select and drag the media files from the **Voyager File Explorer** to the **Media Content** page.

   The media file has been added to the **Media Content** page.

   ★ If the **Media File** is accessible for both **Voyager** and **Voyager Trackless Studio**, a thumbnail will be generated and a green prompt will be displayed indicating that both engines have access to the file and you can apply the media file in the **Voyager** project.

   ★ If the **Media File** is only accessible in **Voyager**, **Voyager Trackless Studio** will not be able to generate a thumbnail image locally. A warning prompt will be displayed however you can still apply the media file in the **Voyager** project.

   ★ If the **Media File** is only accessible in **Voyager Trackless Studio**, an error prompt will be displayed and you will not be able to apply the media file in the **Voyager** project.

Media Content

The **Media Content** section is made up of 20 pages each containing a 7x7 thumbnail grid allowing for media files to be dragged and dropped into place.

Voyager Trackless Studio supports **PNG** and **JPEG** image files, and **MP4** or **XPression Video Codec XPVC AVI** video files.

Media Content pages can get renamed and organized by the type of media files being imported. For example, you can have pages for image files and pages for video files.

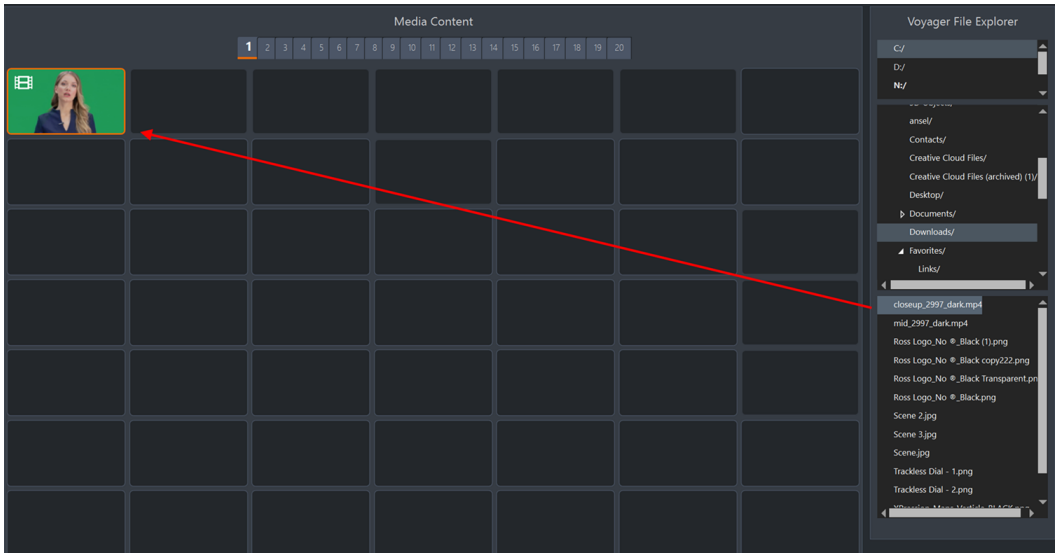
Thumbnails of media files can be moved from one place to another on the same page or moved between pages by dragging and dropping.

You can **Validate** media content to verify the accessibility of the media file in both **Voyager** and **Voyager Trackless Studio,** and you can **Reload** content to refresh the thumbnail images if the content has been overwritten.

For information on successfully importing **Media Files** see Voyager File Explorer.

To add media files to Media Content pages:

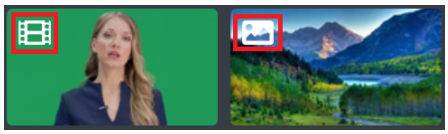
- From the **Voyager File Explorer** select the media file(s) you want to import and drag them into the thumbnails in the **Media Content** section.



Media Content - Adding Media

The media files are added to the **Media Content** page.

Video media files will display a video reel icon and image media files will display a photo icon.



Media Content - Media File Icons

To rename Media Content pages:

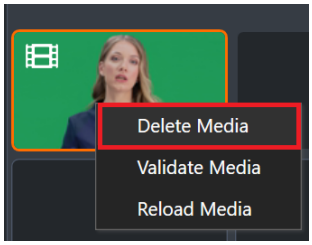
1. From the **Media Content** section, double-click on the page number that you want to rename.
2. Enter a new name or title for the page number and press **Enter**.

Media Content - Rename Page

Once media files have been added to the **Media Content** pages the page numbers/titles will appear bolded and larger in size, this signals that media content has been added to those specific pages.

To remove a single media item from a Media Content page:

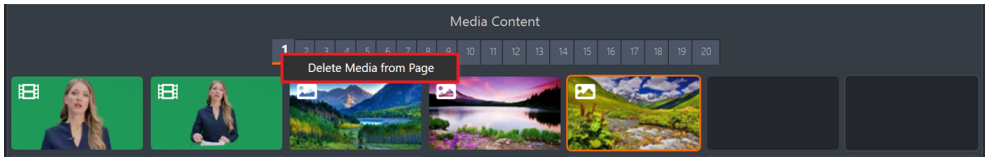
1. In the **Media Content** section, select the media file you want to remove and right-click.
2. Select **Delete Media**.



Media Content - Delete Media

To remove all media items from a Media Content page:

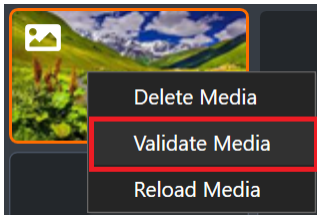
1. In the **Media Content** section, select the page you want to remove the media files from.
2. Right-click on the page number or page title and select **Delete Media from Page**.



Media Content - Delete Media From Page

To validate Media Content:

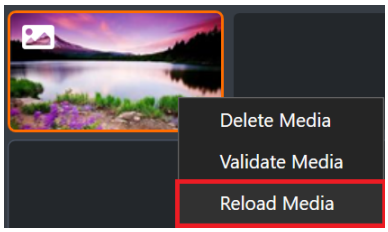
1. In the **Media Content** section, select the media file you want to validate and right-click.
2. Select **Validate Media.**



Media Content - Validate Media

To reload Media Content:

1. In the **Media Content** section, select the media file you want to reload and right-click.
2. Select **Reload Media**.



Media Content - Reload Media

Applying Content to a Media Target

Once media files have been imported into the **Media Content** section, you can apply the content to the target automatically or create individual events.

For information on creating events see Events.

To apply content to a Media Target:

1. In the **Media Target** column, select the target to which you want to apply a media file.
2. In the **Media Content** section, find and select the thumbnail of the media file you want to apply and select the **Apply Content to Target** button.

Appendix A: Enabling A Port Number in the Firewall

When using Voyager Trackless Studio, you need to make sure that any port you are using to listen to connections has been enabled in the Windows Defender Firewall.

To enable a port number:

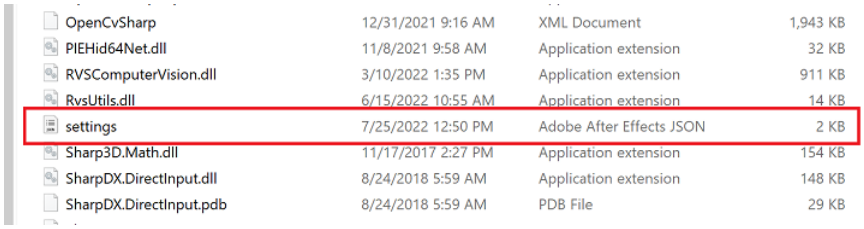
1. In the **Windows Control Panel**, select **Windows Defender Firewall**.
2. Select **Advanced settings > Inbound Rules**.
3. In the **Actions** pane, select **New Rule**.
4. In the **Rule Type** window, select **Port** and click **Next**.
5. In the **Protocol and Ports** window, select **TCP**.
6. Select **Specific local ports**, enter the port number you will be using and click **Next**.
7. In the **Action** window, select **Allow the connection** and click **Next** again.
8. In the **Name** window, enter a name for the new rule (e.g., Voyager Trackless Studio, Voyager Web API, Lucid Studio, RossTalk, etc.) and click **Finish**.
9. Close all the windows.

Appendix B: Advanced Security Settings

You can operate Voyager Trackless Studio remotely through external devices, so restricting access to remote functionalities may be important. Creating a **WhiteList** allows you to limit the IP addresses that have access.

Below are the steps to prevent unauthorized access when using RossTalk or the Web API server.

1. Locate the **Settings** file in the Voyager Trackless Studio installation folder, typically **C:\ROSS\Voyager Trackless\Voyager Trackless**.



Settings File

2. Open the settings.json file in a text editor and locate the RossTalk and Web API configurations.

Settings - JSON file

3. To configure a **WhiteList** for the RossTalk or WebApi servers — add the following to the settings.json file:

```
"RossTalk": {
      "Enabled": true,
      "Port": 7788 },
      "WhiteList": {
        "Enabled": true,
        "List": [ "000.0.0.1", XXX.XXX.XX.XX" ]
      }


   "WebApi": {
      "Enabled": true,
      "Port": 8083,
      "WhiteList": {
       "Enabled":  true,
        "List": [ "000.0.0.1", "XXX.XXX.XX.XX" ]
      }
```

4. Restart Voyager Trackless Studio to apply the **WhiteList** settings.

   The system will only allow authorized IP addresses as listed.

   All other IP addresses are rejected.

To disable the WhiteList

1. Change "**Enabled**": **true**, to "**Enabled**": **false**.
2. **Restart** Voyager Trackless Studio.

Appendix C: Keyboard Shortcuts

Shortcuts for the following sections are included in this section:

Events Panel Shortcuts

Event Focus Shortcuts

Command	Shortcut
Focus on the first Event	Page Up
Execute the current focused Event and move to the next one	Page Down
Focus on the first Event	Up Arrow
Execute the current focused event and move to the next one	Down Arrow

Event Trigger Shortcuts

Command	Shortcut
Trigger Event 1	CTRL+1
Trigger Event 2	CTRL+2
Trigger Event 3	CTRL+3
Trigger Event 4	CTRL+4
Trigger Event 5	CTRL+5
Trigger Event 6	CTRL+6
Trigger Event 7	CTRL+7
Trigger Event 8	CTRL+8
Trigger Event 9	CTRL+9
Trigger Event 10	CTRL+10

Camera Presets Shortcuts

Camera 1 Preset Shortcuts

Command	Shortcut
Recall Camera 1 Preset 1	CTRL+Q
Recall Camera 1 Preset 2	CTRL+W
Recall Camera 1 Preset 3	CTRL+E
Recall Camera 1 Preset 4	CTRL+R
Recall Camera 1 Preset 5	CTRL+T
Recall Camera 1 Preset 6	CTRL+Y
Recall Camera 1 Preset 7	CTRL+U
Recall Camera 1 Preset 8	CTRL+I
Recall Camera 1 Preset 9	CTRL+O
Recall Camera 1 Preset 10	CTRL+P

Camera 2 Preset Shortcuts

Command	Shortcut
Recall Camera 2 Preset 1	CTRL+A
Recall Camera 2 Preset 2	CTRL+S
Recall Camera 2 Preset 3	CTRL+D
Recall Camera 2 Preset 4	CTRL+F
Recall Camera 2 Preset 5	CTRL+G
Recall Camera 2 Preset 6	CTRL+H
Recall Camera 2 Preset 7	CTRL+J
Recall Camera 2 Preset 8	CTRL+K
Recall Camera 2 Preset 9	CTRL+L
Recall Camera 2 Preset 10	CTRL+SEMICOLON (;)

Camera Focus Debug Draw Shortcuts

Command	Shortcuts
Enable Camera Focus Debug Draw	Shift+Add
Disable Camera Focus Debug Draw	Shift+Subtract

Appendix D: RossTalk Commands

Camera Commands

GPIs will automatically be assigned to cameras and every camera preset will have a corresponding GPI automatically assigned and displayed above the **Camera Preset** thumbnails.

GPI Indicator on Preset

The tables below show how each GPI is assigned to 4 cameras and their camera presets, but Voyager Trackless supports more camera presets. Presets for a 5th camera could have GPIs in the range 50 - 59, etc. There are 299 GPIs reserved for recalling camera presets.

The following table provides the RossTalk Commands for **Cameras 1** and **2**.

Camera 1			**Camera 2**		
Command	**GPI #**	**Description**	**Command**	**GPI #**	**Description**
GPI	**01**	Recall Camera 1	**GPI**	**02**	Recall Camera 2
GPI	**10**	Recall Camera 1 Preset 1	**GPI**	**20**	Recall Camera 2 Preset 1
GPI	**11**	Recall Camera 1 Preset 2	**GPI**	**21**	Recall Camera 2 Preset 2
GPI	**12**	Recall Camera 1 Preset 3	**GPI**	**22**	Recall Camera 2 Preset 3
GPI	**13**	Recall Camera 1 Preset 4	**GPI**	**23**	Recall Camera 2 Preset 4
GPI	**14**	Recall Camera 1 Preset 5	**GPI**	**24**	Recall Camera 2 Preset 5
GPI	**15**	Recall Camera 1 Preset 6	**GPI**	**25**	Recall Camera 2 Preset 6
GPI	**16**	Recall Camera 1 Preset 7	**GPI**	**26**	Recall Camera 2 Preset 7
GPI	**17**	Recall Camera 1 Preset 8	**GPI**	**27**	Recall Camera 2 Preset 8
GPI	**18**	Recall Camera 1 Preset 9	**GPI**	**28**	Recall Camera 2 Preset 9
GPI	**19**	Recall Camera 1 Preset 10	**GPI**	**29**	Recall Camera 2 Preset 10

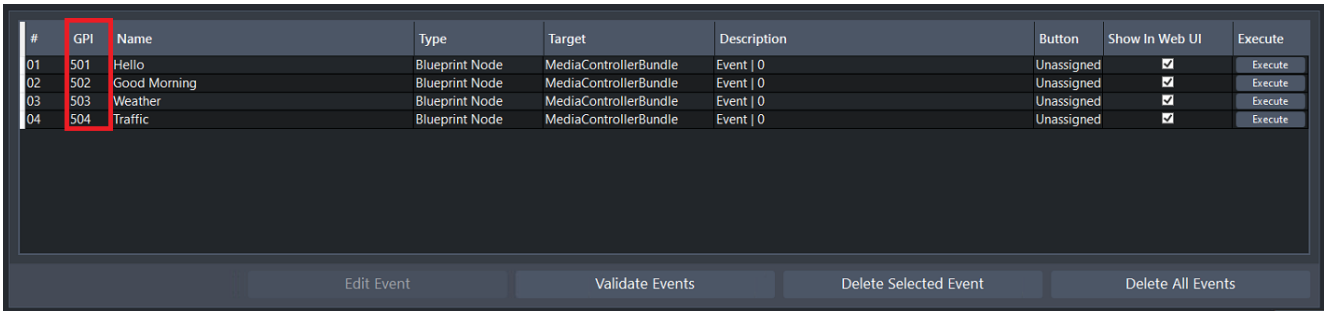
The following table provides the RossTalk Commands for **Cameras 3** and **4**.

Camera 3			Camera 4		
Command	**GPI #**	**Description**	**Command**	**GPI #**	**Description**
GPI	**03**	Recall Camera 3	**GPI**	**04**	Recall Camera 4
GPI	**30**	Recall Camera 3 Preset 1	**GPI**	**40**	Recall Camera 4 Preset 1
GPI	**31**	Recall Camera 3 Preset 2	**GPI**	**41**	Recall Camera 4 Preset 2
GPI	**32**	Recall Camera 3 Preset 3	**GPI**	**42**	Recall Camera 4 Preset 3
GPI	**33**	Recall Camera 3 Preset 4	**GPI**	**43**	Recall Camera 4 Preset 4
GPI	**34**	Recall Camera 3 Preset 5	**GPI**	**44**	Recall Camera 4 Preset 5
GPI	**35**	Recall Camera 3 Preset 6	**GPI**	**45**	Recall Camera 4 Preset 6
GPI	**36**	Recall Camera 3 Preset 7	**GPI**	**46**	Recall Camera 4 Preset 7
GPI	**37**	Recall Camera 3 Preset 8	**GPI**	**47**	Recall Camera 4 Preset 8
GPI	**38**	Recall Camera 3 Preset 9	**GPI**	**48**	Recall Camera 4 Preset 9
GPI	**39**	Recall Camera 3 Preset 10	**GPI**	**49**	Recall Camera 4 Preset 10

Event Commands

Events added to Voyager Trackless Studio will generate their own **GPI** values ranging from **501** to **599**.

Use these GPI values located in the **Events** table under the **Events** tab to recall events.



Events Table - GPI Commands

The following table provides additional RossTalk commands for **Events.**

Command	GPI #	Description
FOCUS	Select Event number (X)	Focus on selected Event number (X)
NEXT		Execute the current focused Event and move to the next one

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