

# MediaReactor Workstation v7

---

User Guide



June 25, 2025

<b>1 Copyrights and Trademark Notices.....</b>	<b>4</b>
1.1 General.....	4
1.2 GNU LESSER GENERAL PUBLIC LICENSE.....	13
1.2.1.1 0. Additional Definitions.....	13
1.2.1.2 1. Exception to Section 3 of the GNU GPL.....	13
1.2.1.3 2. Conveying Modified Versions.....	13
3. Object Code Incorporating Material from Library Header Files.....	14
4. Combined Works.....	14
5. Combined Libraries.....	15
6. Revised Versions of the GNU Lesser General Public License.....	15
1.3 MPEG Disclaimers.....	16
1.3.1 MPEGLA MPEG2 Patent.....	16
1.3.2 MPEGLA MPEG4 VISUAL.....	16
1.3.3 MPEGLA AVC.....	16
1.3.4 MPEG4 SYSTEMS.....	16
1.4 Drastic Technologies Limited Warranty and Disclaimers.....	17
1.4.1 Warranty Remedies.....	17
1.4.2 Software Updates.....	17
1.4.3 Restrictions and Conditions of Limited Warranty.....	17
1.4.4 Limitations of Warranties.....	18
1.4.5 Damages.....	18
<b>2 Introduction.....</b>	<b>19</b>
2.1 Conventions.....	19
2.2 About MediaReactor Workstation Software.....	20
2.3 System Requirements.....	22
2.3.1 Recommended Environment.....	22
2.4 Supported Operating Systems.....	23
2.4.1 macOS.....	23
2.4.2 Windows 32.....	24
2.4.3 Windows 64.....	24
<b>3 Getting Set Up.....</b>	<b>25</b>
3.1 Installation.....	25
3.2 Where to find your files.....	28
3.3 Windows.....	28
3.4 macOS.....	28
3.5 Linux.....	28
3.6 License the Software.....	29
3.6.1 How Do I Remove the Watermarks?.....	29
3.6.2 Licensing for Windows.....	30
3.6.3 Licensing for Linux and macOS.....	31
3.7 License MediaReactor Controls and Displays.....	33
<b>4 Using MediaReactor Workstation.....</b>	<b>34</b>
4.1 ...with Adobe Premiere CC.....	35
4.2 ...with Adobe After Effects CC.....	39
4.3 ...with Adobe Media Encoder CC.....	41
4.4 ...with Adobe Prelude CC (deprecated).....	44
4.5 ...with Adobe Premiere CS5/6.....	49
4.6 ...with Apple Final Cut Pro (Suite 3/7).....	52
4.7 ...with Assimilate Scratch/Lab.....	56

4.8 ...with Autodesk Flame.....	60
4.9 ...with Avid Media Composer 6 (Symphony, NewsCutter).....	71
4.10 ...with Apple Compressor.....	73
4.11 ...with Apple Motion.....	74
4.12 ...with Adobe Media Encoder.....	75
4.13 ...with QuickTime Player.....	76
4.14 ...with Windows Media Player.....	77
4.15 Live Event Editing in FCP7, Premiere and Media Composer.....	77
4.16 Indiecama MOV File Reader Configuration.....	77
4.16.1 Overriding IndieCam MOV Files' FourCC.....	77
4.17 Multichannel Audio File Naming.....	79
4.18 Closed Caption Format Support.....	81
4.19 macOS Enabling legacy codecs for more output choices in QuickTime 7.4 and greater.....	82
4.20 macOS Using MediaReactor Workstation as a source reader for your own (or other) programs.....	82
4.21 Windows Using MediaReactor Workstation as a source reader for your own (or other) programs.....	83
4.22 OS Independent MkRefMov - Make Reference Movie.....	84
4.23 AddTcMov - Add Time Code To An Existing QuickTime MOV.....	84
4.24 mkRtIndex - Make An rtin (Real Time Index) File.....	84
4.25 MRMetaData - Extract a File's Metadata Information.....	85
4.26 MRAnalyze - Use Standard PSNR/(MS)SSIM to Compare an Original and Converted File....	85
4.27 Accessing S3/HTTP/HTTPS Assets with .STREAM Files.....	86
4.27.1 Direct Access to Cloud Assets.....	86
4.27.2 DTStreamFileCreator for S3 Access.....	87
4.27.2.1 Make Stream File.....	89
4.27.2.2 Localize File.....	90
4.27.2.3 Encrypt Stream.....	90
<b>5 Command Line Utilities.....</b>	<b>91</b>
5.1 mrcmd.....	91
5.2 mkrtindex.....	93
5.3 addtcmov (windows 32 only).....	94
5.4 mkrefmov (windows 32 only).....	94
5.5 mrmetadata.....	95
5.6 mranalyze.....	96
5.7 mrfix.....	97
<b>6 Appendix - Drastic DT3D Stereo File.....</b>	<b>99</b>
<b>7 Appendix - Drastic DHDR/HDR YUV RAW Video Header Format.....</b>	<b>104</b>

# 1 Copyrights and Trademark Notices

## 1.1 General

Copyright 2025, Drastic Technologies Ltd. All rights reserved worldwide. No part of this publication may be reproduced, transmitted, transcribed, altered, or translated into any languages without the written permission of Drastic Technologies. Information and specifications in this document are subject to change without notice and do not represent a commitment on the part of Drastic Technologies.

**A&E Television Networks** - A&E Networks is a trademark of A&E Television Networks

**Adobe, Inc.** - Adobe, the Adobe logo, Adobe Premiere, Adobe After Effects, Creative Cloud, Frame.io, and Iridas are either registered trademarks or trademarks of Adobe in the United States and/or other countries.

**Advanced Micro Devices, Inc.** - AMD is a trademark of Advanced Micro Devices, Inc.

**ADVANTECH CO., LTD** - ADVANTECH and B&B are trademarks of ADVANTECH CO., LTD

**AES Audio Engineering Society** - AES and Audio Engineering Society are trademarks of the Audio Engineering Society

**aescripts + aeplugins** - ZXPIInstaller Copyright aescripts + aeplugins 2023

**AIMS Alliance** - The AIMS Alliance is a trademark of Alliance for IP Media Solutions (AIMS).

**AJA Video Systems, Inc.** - AJA® is a registered trademark of AJA Video Systems, Inc. AJA™ is a trademark of AJA Video Systems, Inc. Corvid Ultra®, KONA®, IO®, KUMO®, U-Tap®, and T-Tap® are registered trademarks of AJA Video Systems, Inc.

**Amazon Web Services, Inc.** - Amazon, AWS and Smile Logo, Powered by AWS Logo, AWS Co-Marketing Tools, the Partner Logo, the Program Marks, Amazon Web Services, AWS, AWS S3, and the names of AWS products, services, programs, and initiatives are trademarks or registered trademarks of Amazon Web Services, Inc.

**Amberfin Limited** - AMBERFIN is a trademark of Amberfin Limited.

**AMERICAN BROADCASTING COMPANIES, INC** - ABC is a trademark of AMERICAN BROADCASTING COMPANIES, INC

**American Cinematographer** - The ASC, American Cinematographer and Friends of the ASC are trademarks of the American Society of Cinematographers. (All rights reserved)

**AMWA Advanced Media Workflow Association, Inc.** - Copyright © 2025 AMWA – Advanced Media Workflow Association. All rights reserved.

**Animation Magazine** - © 2025 Animation Magazine. All Rights Reserved. The Business, Technology & Art Of Animation And VFX

**Apple Inc.** - Apple, the Apple logo, Final Cut, Final Cut Pro, Apple TV, iOS, iPad, iPhone, iPod touch, iTunes, Mac, Mac OS X, macOS, Shake, Final Cut Pro, ProRes, High Sierra, Mojave, Ventura, Sonoma, M1, M2, and QuickTime are trademarks of Apple Inc., registered in the U.S. and other countries. OpenCL and the OpenCL logo™ are trademarks owned by Apple Inc. and licensed to the Khronos Group.

**ARRI AG** – ARRI, Arri T-Link, and Alexa are registered trademarks of the ARRI Group

**ASSIMILATE® Inc.** - Assimilate SCRATCH and Assimilate SCRATCH Lab are either trademarks

or registered trademarks of ASSIMILATE® Inc. or its subsidiaries in the United States and/or other countries.

**ATI TECHNOLOGIES ULC** - ATI is a trademark of ATI TECHNOLOGIES ULC

**ATSC: The Broadcast Standards Association** - © 2025 ATSC Advanced Television Systems Committee, Inc.

**Autodesk, Inc.** - Autodesk, Discreet, Flame, Flare, Smoke, Lustre, Maya, and Moxion are either trademarks or registered trademarks of Autodesk, Inc. or its subsidiaries in the United States and/or other countries.

**Avid Technology, Inc.** - Avid Media Composer®, Avid MediaCentral®, Avid Interplay®, ProTools®, and Avid NewsCutter® are either trademarks or registered trademarks of Avid Technology, Inc. or its subsidiaries in the United States and/or other countries.

**Axis Communications AB** - Axis is a registered trademark of Axis Communications AB

**Bell Media Inc.** - Bell Media, BNN, CP24, CTV, CTV TWO, Much, MuchMusic and The Comedy Network, and all associated designs and logos are trademarks of Bell Media Inc.

**Belle Nuit Montage** - Matthias Bürcher August 2000-2016. All rights reserved. Written in Switzerland. Starting 2016 Belle Nuit Subtitler is released under the GNU Lesser General Public License

**BirdDog Software Corporation** - BIRDDOG is a trademark of BirdDog Software Corporation

**Blackmagic Design Pty. Ltd.** - DaVinci Resolve, DaVinci Fusion, UltraStudio, DeckLink, Intensity Pro 4K, UltraScope, and RED are either trademarks or registered trademarks of Blackmagic Design Pty. Ltd. or its subsidiaries in the United States and/or other countries.

**Bluefish Technologies** - Bluefish444, IngeSTore, Symmetry, Kronos, Epoch, Epoch:Neutron, Fury, Lust, Vengeance HD, Deepblue, Envy SD, and Epoch:SuperNova are trademarks of Bluefish Technologies

**Boris FX, Inc.** - Boris FX, Sapphire, and Silhouette are trademarks of Boris FX, Inc.

**Bridge Digital, Inc.** - Bridge Digital is a trademark of Bridge Digital, Inc..

**Bridge Technologies Co AS** - Bridge Technologies is a trademark of Bridge Technologies Co AS

**Bright Technologies, Inc.** - Bright and Bright Systems are trademarks of Bright Technologies, Inc.

**British Broadcasting Corporation** - BBC is a trademark of British Broadcasting Corporation

**Broadcast Beat** - © 2025 Relevant Media Properties, LLC. All Rights Reserved.

**BT Group plc** - BT is a trademark of BT Group plc

**Cable News Network, Inc.** - CNN is a trademark of Cable News Network, Inc.

**Canadian Federal Institutions** - Official symbols of federal institutions, including the Arms of Canada may not be reproduced, whether for commercial or non-commercial purposes, without prior written authorization.

**CANON KABUSHIKI KAISHA** - CANON is a trademark of CANON KABUSHIKI KAISHA

**Catapult Group International Ltd** - Catapult is a trademark owned by Catapult Group International Ltd

**Changsha Kiloview Electronics Co., Ltd** - KILOVIEW is a trademark of Changsha Kiloview Electronics Co., Ltd

**Charter Communications Inc.** - Charter Communications is a trademark of Charter

Communications Inc.

**CineSys LLC** – CineSys is a registered trademark of CineSys LLC.

**Cisco Systems, Inc.** - Cisco, and Webex are registered trademarks of Cisco Systems, Inc.

**Cloudfirst Technology Solutions Inc.** - Cloudfirst is a registered trademark of Cloudfirst Technology Solutions Inc.

**Cobalt Digital** - Cobalt Digital is a registered trademark of Cobalt Digital Inc.

**Codex Corporation** - CODEX and Action Cam are trademarks of Codex Corporation

**Comcast Corporation** - Sky UK Limited is a wholly owned subsidiary of Comcast Corporation

**Control Corporation** - Control is a registered trademark of Control Corporation

**CoreCodec, Inc.** - MATROSKA is a trademark of CoreCodec, Inc.

**Corel Corporation** - WinZip, the WinZip vise and file logo, and Pinnacle are registered trademarks of Corel Corporation

**CORSAIR MEMORY, INC.** - ELGATO is a trademark of CORSAIR MEMORY, INC.

**Corus Entertainment Inc.** - CORUS is a trademark of Corus Entertainment Inc.

**Crayon Software Experts Spain SL** - Crayon is a trademark of Crayon Software Experts Spain SL

**CrypKey Inc (formerly Kenonics)** - CrypKey is a registered trademark of CrypKey Inc.

**Deadline** - Deadline is a part of Penske Media Corporation. © 2025 Deadline Hollywood, LLC. All Rights Reserved.

**Deltacast** - © Copyright 2024 DELTACAST. All rights reserved

**Deluxe Media Inc.** - Deluxe is a trademark of Deluxe Media Inc.

**Digital Formation, Inc.** - Digital Formation is a Copyright of Digital Formation, Inc.

**Digital Video Systems Ltd** - DVS is a trademark of Digital Video Systems Ltd

**DIGITNOW!** - Digitnow is a trademark of DIGITNOW!

**Docker Inc.** - DOCKER is a trademark of Docker, Inc.

**Dolby Laboratories** – Dolby, Dolby Vision, the double-D symbol, and Millicast are registered trademarks of Dolby Laboratories.

**DPP - The Digital Production Partnership** - DPP is a registered trademark | Digital Production Partnership © 2025

**Drastic Technologies, Ltd.** – 2110Scope, 4KScope, ccConvert, Drastic Technologies, DrasticPreview, DrasticScope, FlowCaster, HDRScope, Media File Scanner, MediaNXS, MediaReactor, MediaReactor Workstation, MR Lite, ndiScope, Net-X-Code Channel, Net-X-Code Server, Net-X-Convert, Net-X-Proxy, Network Video Analyzer, NetXfer, NETXROUTER, NetXScope, QuickClip, sdiScope, SyncControl, TcCalc, TestPatternGenerator, videoQC Inspect, videoQC Pro, videoQC View, and videoQC Workstation are trademarks of Drastic Technologies Ltd.

**DTS** - DTS, the Symbol, and DTS and the Symbol together are registered trademarks of DTS, Inc.

**Dublin Core™ Metadata Initiative** - "Dublin Core" is a protected under common law trademark of the Dublin Core™ Metadata Initiative.

**Eastman Kodak Company** - Cineon™ is a trademark of Eastman Kodak Company

**Eaton Corporation plc** - Eaton, Tripp Lite, and PowerAlert are registered trademarks of Eaton Corporation plc

**EBU** - Copyright EBU 2025. All rights reserved.

**Empress Media Asset Management (eMAM)** – eMAM, and eMAMDirector are registered trademarks of Empress Media Asset Management (eMAM)

**Entertainment and Sports Programming Network** - ESPN is a trademark of Entertainment and Sports Programming Network

**Epic Games, Inc.** - UNREAL ENGINE is a trademark of Epic Games, Inc..

**Epiphan** - All Epiphan product names and logos are trademarks or registered trademarks of Epiphan

**Evercast, LLC** - EVERCAST is a trademark owned by Evercast, LLC

**Evertz Technologies Limited** - Evertz is a registered trademark of Evertz Technologies Limited

**EVS Broadcast Equipment** - EVS is a registered trademark of EVS Broadcast Equipment

**Fabrice Bellard** - FFmpeg is a trademark of Fabrice Bellard

**Filestage GmbH** - Filestage is a trademark of Filestage GmbH

**FilmLight Ltd.** - FilmLight and BaseLight are trademarks of FilmLight Ltd.

**Filmworkz** - Filmworkz is an operating brand of BlissTek Ltd. BlissTek Ltd. Filmworkz Nucoda is either a trademark or registered trademark of BlissTek Ltd. or its subsidiaries in England, Wales, and/or other countries.

**For-A** - For-A is a registered trademark of FOR-A COMPANY LIMITED, Copyright © FOR-A Company Limited.

**France Télévisions** - France.tv is a trademark of France Télévisions

**Fraunhofer IIS and Thomson Multimedia** - MPEG Layer-3 audio coding technology licensed from Fraunhofer IIS and Thomson Multimedia.

**Fraunhofer-Gesellschaft zur Förderung deer angewandten Forschung e.V.** - EASYDCP is a trademark and brand of Fraunhofer-Gesellschaft zur Förderung deer angewandten Forschung e.V..

**Free Software Foundation (FSF)** - Portions of this product are licensed under LGPL, governed by the GNU LESSER GENERAL PUBLIC LICENSE, published by the Free Software Foundation (FSF).

**Ftrack AB** - FTRACK is a trademark and brand of Ftrack AB

**Gen Digital Inc. (formerly Symantec Corporation and NortonLifeLock)** - Symantec, Symantec Endpoint Virtualization Suite, Sygate, Altiris, and Altiris Virtualization Agent are registered trademarks of Gen Digital Inc.

**Google LLC** – YouTube, Google, Google Cloud, Google.meet.com, and Android are registered trademarks of Google LLC

**GoPro, Inc.** - Cineform® is a trademark or registered trademark of GoPro, Inc.

**Grass Valley USA, LLC** - Grass Valley®, GV®, the Grass Valley logo, and EDIUS® are trademarks or registered trademarks of Grass Valley USA, LLC, or its affiliated companies in the United States and other jurisdictions.

**HaiVision Systems, Inc.** - Haivision is a registered trademark of HaiVision Systems, Inc.

**Harmonic** - Harmonic is a registered trademark of Harmonic Inc.

**Harris Corporation** - Harris, and Leitch Technology Corp. are registered trademarks of Harris Corporation

**Hewlett Packard Enterprise Company** – OpenGL and SGI are registered trademarks and the



OpenGL SC logo is a trademark of Hewlett Packard Enterprise Company

**Hewlett Packard Group LLC** - HP is a trademark of HP Hewlett Packard Group LLC.

**i-scream** - i-scream is a trademark of i-scream

**IABM** - © 2025 IABM IABM is company limited by guarantee. Registered in England No: 5262009. Registered Office: IABM, 5 Deansway, Worcester, WR1 2JG

**IBC** - IBC (International Broadcasting Convention) is owned and run by the IBC Partnership, comprising six industry bodies: IEEE, IET, IABM, SCTE, SMPTE, and RTS.

**Ideal Systems Asia Pacific Ltd.** - Ideal Systems is a registered trademark of Ideal Systems Asia Pacific Ltd.

**IEEE - IEEE Broadcast Technology Society** - The IEEE emblem is a trademark owned by the IEEE for the purpose of indicating membership in the IEEE.

**Ikegami Electronics (USA) Inc.** - EditCam is a registered trademark of Ikegami Electronics (USA) Inc.

**Indiecam GmbH** - IndieCam is a registered trademark of Indiecam GmbH

**Infocomm** - InfoComm, AVIXA and associated logos are a trademark or registered trademark of AVIXA

**INOGENI Inc** - INOGENI® is a Registered Trademark and TOGGLE is a Trademark of INOGENI Inc

**Institute of Electrical and Electronics Engineers** - IRE is a trademark of the Institute of Electrical and Electronics Engineers

**INTEL CORPORATION** - INTEL is a trademark of INTEL CORPORATION

**International Business Machines Corporation (“IBM”)** - IBM® is a trademark owned by International Business Machines Corporation (“IBM”) and might also be trademarked or a registered trademark in other countries

**Interactive Effects, Inc.** - Piranha is a registered trademark of Interactive Effects, Inc.

**Intraware, Inc.** – Intraware is a registered trademark of Intraware, Inc.

**IO Industries Ltd.** - IO Industries is a trademark of IO Industries Ltd.

**Iteris, Inc.** - Odetics is a registered trademark of Iteris, Inc.

**JVC KENWOOD CORPORATION** - JVC is a trademark of JVC KENWOOD CORPORATION

**Kinefinity Inc.** - KINEFINITY is a trademark of Kinefinity Inc.

**L3Harris Technologies, Inc.** - Louth is a trademark of L3Harris Technologies, Inc.

**LeeLu Soft** - Watch 4 Folder is a trademark of LeeLu Soft

**LinkedIn Corporation** - LinkedIn is a trademark of LinkedIn Corporation

**Linus Torvalds** - Linux® is the registered trademark of Linus Torvalds in the U.S. and other countries.

**Logitech International SA** - LOGITECH is a trademark of Logitech International SA

**LogMeIn, Inc.** - GoTo is a trademarks and service marks of LogMeIn, Inc., and may be registered in the U.S. Patent and Trademark Office and in other countries.

**Louper.io Ltd** - Louper.io is a trademark of Louper.io Ltd

**Lynx Technik AG** - LYNX TECHNIK AG is a trademark of LYNX TECHNIK AG.

**Magic Lantern** - Magic Lantern is a registered trademark of Magic Lantern

**MAINCONCEPT GMBH** - MAIN CONCEPT is a trademark of MAINCONCEPT GMBH

**Marshall Electronics, Inc.** - Marshall is a registered trademark of Marshall Electronics, Inc.



**Mastercard International Incorporated** - Mastercard is a trademark of Mastercard International Incorporated

**Matrox Electronic Systems, Ltd** - Matrox and Matrox product names are registered trademarks and/or trademarks of Matrox Electronic Systems, Ltd.

**MediaArea.net SARL** - MediaInfo - Copyright © 2002-2013 MediaArea.net SARL. All rights reserved.

**Mellanox Technologies, Inc** - Mellanox® and ConnectX® are registered trademarks of Mellanox Technologies, Inc

**Meta Platforms, Inc** - Facebook and Instagram are trademarks of Meta Platforms, Inc

**Metro-Goldwyn-Mayer Studios, Inc.** - Metro Goldwyn Mayer, and MGM, are trademarks of Metro-Goldwyn-Mayer Studios, Inc.

**Microsoft Corporation** – Microsoft: Windows®, Video For Windows (VFW), DirectShow, Microsoft, Skype, Microsoft Azure, Microsoft Teams, Wave Mapper, Microsoft, Windows NT|2000|XP|XP Professional|Server 2003|Server 2008 |Server 2012, Windows 7, Windows 8, Windows 10, Media Player, Media Encoder, Windows Defender, Microsoft Office, .Net, Internet Explorer, SQL Server 2005|2008|2012|2014, Windows Media Technologies and Internet Explorer are trademarks of Microsoft Corporation.

**MPEG LA** - MPEG LA licenses patent pools covering essential patents required for use of the MPEG-2, MPEG-4, IEEE 1394, VC-1, ATSC, MVC, MPEG-2 Systems, AVC/H.264 and HEVC standards.

**Nanjing Magewell Electronics Co.** - Magewell™, ULTRA STREAM® and (the MAGEWELL Logo) are trademarks or registered trademarks of Nanjing Magewell Electronics Co.

**National Aeronautics and Space Administration** - NASA is a registered trademark of The National Aeronautics and Space Administration

**NAB** - NABShow and NAB © 2025 National Association of Broadcasters

**National Geographic Society** - NATIONAL GEOGRAPHIC is a trademark of National Geographic Society

**NBA Properties, Inc.** - NBA and the NBA logo are trademarks of NBA Properties, Inc.

**NBC UNIVERSAL MEDIA, LLC** - NBC and NBC Universal are trademarks of NBC UNIVERSAL MEDIA, LLC

**Netflix, Inc.** - Netflix is a registered trademark of Netflix, Inc.

**Nevion** - copyright NEVION - All rights reserved. Nevion @ 2023

**New Media Manitoba** - Copyright © 2025 New Media Manitoba

**NewTek, Inc.** - NDI, TriCaster, 3Play, TalkShow, Video Toaster, LightWave 3D, and Broadcast Minds are registered trademarks of NewTek, Inc.

**Nexidia Inc.** - NEXIDIA is a trademark owned by Nexidia Inc.

**NGC Corporation** - NGC is a registered trademark of NGC Corporation

**Nippon Hatsujiyo Kabushiki Kaisha** - NHK is a trademark of Nippon Hatsujiyo Kabushiki Kaisha

**Nokia Corporation** - OSPREY is a trademark owned by Nokia Corporation

**NVIDIA Corporation** - NVIDIA, the NVIDIA logo, NVIDIA Quadro, Rivermax, BlueField2, PhysX, and NVIDIA RTX are trademarks and/or registered trademarks of NVIDIA Corporation in the U.S. and/or other countries

**Object Matrix Limited** - ObjectMatrix, and Object Matrix are registered trademarks of Object

Matrix Limited

**Omneon Video Networks, Inc** - Omneon is a trademark of Omneon Video Networks, Inc  
**ONVIF** - the ONVIF primary trademark is the word, "ONVIF". This trademark has been registered in the United States, European Union, China, Japan and other countries throughout the world.

**OpenSSL Project Authors** - OpenSSL is a trademark of OpenSSL Project Authors

**Oracle Corporation** - Oracle®, Java, Front Porch Digital, and MySQL are registered trademarks of Oracle Corporation and/or its affiliates.

**Panasonic Holdings Co., Ltd** - Panasonic, and Varicam are trademarks of Panasonic Holdings Co., Ltd

**Pantone, Inc.** - Pantone is a registered trademark of Pantone, Inc

**PayPal, Inc.** - PAYPAL is a trademark of PayPal, Inc.

**PELOTON INTERACTIVE, INC.** - PELOTON is a trademark of PELOTON INTERACTIVE, INC.

**Pioneer Corporation** - Pioneer is a registered trademark of Pioneer Corporation

**Post Magazine** - © Copyright 2024 Post Magazine. All Rights Reserved.

**ProAV** - PRO AV SYSTEMS is a trademark of Pro AV Systems, Inc

**Production Weekly** - Copyright © 2015-2025 Production Weekly

**RE:Vision Effects, Inc.** - RE:Vision Effects is a registered trademark of RE:Vision Effects, Inc.

**Red Hat, Inc.** - Red Hat, and the Red Hat logo are trademarks or registered trademarks of Red Hat, Inc. or its subsidiaries in the United States and other countries

**Reddit** - Reddit's trademarks and other brand assets are owned by Reddit.

**Rogers Communications Inc.** - Rogers and related marks are trademarks of Rogers Communications Inc. or an affiliate, used under licence.

**Ross Video** - ©2022 Ross Video Limited, Ross®, MiniME™, and any related marks are trademarks or registered trademarks of Ross Video Limited

**Shenzhen Yunlang Technology Co., Ltd.** - MOKOSE is a trademark of Shenzhen Yunlang Technology Co., Ltd.

**Sigma Design Company, LLC** - Sigma Design is a registered trademark of Sigma Design Company, LLC

**Sinclair Broadcast Group, Inc.** - Sinclair Broadcast Group is a trademark of Sinclair Broadcast Group, Inc.

**Snell & Wilcox Limited** - SNELL & WILCOX, and Quantel are trademarks owned by Snell & Wilcox Limited

**Society of Broadcast Engineers** - Copyright, Society of Broadcast Engineers Chapter One, all rights reserved. The SBE logo is used by permission of the Society of Broadcast Engineers.

**Society of Cable Telecommunications Engineers (SCTE)** - ©2025 Society of Cable Telecommunications Engineers, Inc. is a subsidiary of CableLabs. All rights reserved.

**Society of Motion Picture and Television Engineers** - Motion Imaging Journal and SMPTE are trademarks of Society of Motion Picture and Television Engineers.

**SoftNI Corporation** – SoftNI is a trademark of SoftNI Corporation

**Sony Corporation** – Sony, Sony DVD Architect, DVD, Catalyst, and Vegas are trademarks of Sony Corporation and/or its affiliates.

**Sound On Sound** - copyright © SOS Publications Group and/or its licensors, 1985-2025. All rights reserved.

**SRI International** - SARNOFF CORPORATION is a trademark of SRI INTERNATIONAL.

**SRT (Secure Reliable Transport)** - SRT, developed by Haivision, is a royalty free, open source protocol

**Streambox Inc.** - Streambox is a trademark of Streambox Inc.

**Streaming Media** - Copyright © 2009 - 2025 Streaming Media Magazine

**STREAMWELL LLC** – Streamwell is a trademark of STREAMWELL LLC

**Technicolor Creative Studios SA** - Technicolor is a trademark of Technicolor Creative Studios SA

**TechSmith Corporation** - CAMTASIA STUDIO is a trademark of TechSmith Corporation

**Tektronix, Inc.** - Tektronix® and all identified Tektronix trademarks and logos are the property of Tektronix, Inc. or its wholly-owned subsidiaries

**Telestream, LLC** - Telestream, is a registered trademark, and MacCaption and CaptionMaker are trademarks of Telestream, LLC

**The Apache Software Foundation (ASF)** - Apache is a registered trademark of The Apache Software Foundation

**The Foundry Visionmongers Ltd.** - Nuke™ is a trademark of The Foundry Visionmongers Ltd.

**The Perl Foundation** - Perl and the Perl logo are trademarks of The Perl Foundation

**The Qt Company Ltd** - The Qt Company Ltd and its subsidiaries (“The Qt Company”) is the owner of Qt trademarks (“Qt trademarks”) worldwide, and “froglogic”, “Squish” and “Coco” are trademarks of the Qt Company Ltd.

**THE UNIVISION NETWORK LIMITED PARTNERSHIP** - UNIVISION is a trademark of THE UNIVISION NETWORK LIMITED PARTNERSHIP

**The Walt Disney Company** - Disney, and The Walt Disney Company are trademarks of The Walt Disney Company. LucasFilm is a wholly owned subsidiary of The Walt Disney Company

**Toolfarm.com Inc.** - Toolfarm is a registered trademark of Toolfarm.com Inc.

**Trend Micro Inc.** - TrendMicro, and TrendMicro System Protection and registered trademarks of Trend Micro Inc.

**Truevision, Inc** - TARGA is a registered trademark of Truevision, Inc

**TV Asahi Corporation** - TV Asahi is a trademark of TV Asahi Corporation

**TV Technology** - TV Tech is part of Future US Inc, an international media group and leading digital publisher. © Future US, Inc. Full 7th Floor, 130 West 42nd Street, New York, NY 10036.

**Twitch Interactive, Inc** - TWITCH, the TWITCH Logo, the Glitch Logo, and/or TWITCHTV are trademarks of Twitch Interactive, Inc. or its affiliates.

**Twitter, Inc.** - Twitter is a wholly owned subsidiary of X Holdings Corp.

**Tyler Perry Studios, LLC** - Tyler Perry Studios is a trademark of Tyler Perry Studios, LLC

**Vefxi Corporation** - VEFXi DiamondBlade is a registered trademark of Vefxi Corporation

**ViaLA** - Via Licensing®, ViaSecure® and the Via logo are registered service marks, and any other Via Licensing names, titles or logos are trademarks or service marks, in each case, of Via Licensing Corporation, and are protected by law.

**Video Clarity, Inc.** - Video Clarity and ClearView are trademarks of Video Clarity, Inc.

**Video Services Forum** - ©2024 Video Services Forum

**VideoLAN Non-profit Organization** - VideoLAN, VLC, VLC media player and x264 are trademarks internationally registered by the VideoLAN non-profit organization

**Videomaker** - © Videomaker Inc., 1986 - 2025

**Visa International** - Visa is a registered trademark of Visa International

**Vision Research, Inc** - PHANTOM is a trademark of Vision Research, Inc

**VITEC** - Names and logos identifying products of VITEC are registered trademarks or trademarks of VITEC respectively

**Vizrt** - VIZRT is a trademark of VIZRT AG.

**Warner Bros. Discovery** – Discovery, Turner, and Home Box Office, Inc. (HBO), are trademarks of Warner Bros. Discovery

**Weisscam GmbH** - Weisscam is a trademark and brand of Weisscam GmbH

**Wheatstone** - ® Wheatstone, Audioarts, and VoxPro are registered trademarks and Wheatstone Layers is a trademark of Wheatstone Corporation

**Wizards of OBS, LLC** – UNIX, OBS, Open Broadcast Software, the OBS logo, and OBS Studio are trademarks of Wizards of OBS, LLC (The Company)

**World Animation Summit** - © 2025 Animation Magazine. All Rights Reserved.

**World Wrestling Entertainment, Inc.** - WWE is a trademark of World Wrestling Entertainment, Inc.

**Wowza Media Systems, LLC** - Wowza is a trademark of Wowza Media Systems, LLC

**wxWidgets** - wxWidgets is a trademark of wxWidgets

**Xceed Software Inc.** - Xceed DataGrid for JavaScript, Xceed Ultimate ListBox for Silverlight, Xceed DataGrid for Silverlight, Xceed DataGrid for WPF, Xceed Grid for .NET, Xceed Zip for .NET, Xceed Real-Time Zip for Silverlight, Xceed Upload for Silverlight, Xceed Zip Compression Library, Xceed FTP for .NET, Xceed Chart for .NET, Xceed Chart for ASP.NET, Xceed SmartUI for .NET, Xceed SmartUI, Xceed Encryption Library, Xceed Binary Encoding Library, Xceed Streaming Compression Library, Xceed Streaming Compression for .NET, Xceed Zip for .NET Compact Framework, Xceed Ultimate Suite, Xceed Data Manipulation Suite, Xceed Absolute Packager are trademarks of Xceed Software Inc.

**Xena Networks** - Xena is a trademark of Xena Networks

**Zapex Technologies** - Zapex is a registered trademark of Zapex Technologies

**Zhang Haijun** - RYBOZEN is a trademark of Zhang Haijun

**Ziflow Limited** - Ziflow is a trademark of Ziflow Limited

**Zixi** - Zixi Software and any logos or icons identifying Zixi and the Zixi Software are trademarks of Zixi.

**ZLIB** - The ZLIB Compressed Data Format Specification is Copyright (C) 1995-2013 Jean-Loup Gailly and Mark Adler.

**Zoom Video Communications, Inc.** - Zoom and the Zoom logo are trademarks of Zoom Video Communications, Inc.

**LGPL:** Portions of this product are licensed under LGPL, governed by the following license:

## 1.2 GNU LESSER GENERAL PUBLIC LICENSE

Version 3, 29 June 2007

Copyright © 2007 Free Software Foundation, Inc. <<https://fsf.org/>>

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

This version of the GNU Lesser General Public License incorporates the terms and conditions of version 3 of the GNU General Public License, supplemented by the additional permissions listed below.

### 1.2.1.1 0. *Additional Definitions.*

As used herein, “this License” refers to version 3 of the GNU Lesser General Public License, and the “GNU GPL” refers to version 3 of the GNU General Public License.

“The Library” refers to a covered work governed by this License, other than an Application or a Combined Work as defined below.

An “Application” is any work that makes use of an interface provided by the Library, but which is not otherwise based on the Library. Defining a subclass of a class defined by the Library is deemed a mode of using an interface provided by the Library.

A “Combined Work” is a work produced by combining or linking an Application with the Library. The particular version of the Library with which the Combined Work was made is also called the “Linked Version”.

The “Minimal Corresponding Source” for a Combined Work means the Corresponding Source for the Combined Work, excluding any source code for portions of the Combined Work that, considered in isolation, are based on the Application, and not on the Linked Version.

The “Corresponding Application Code” for a Combined Work means the object code and/or source code for the Application, including any data and utility programs needed for reproducing the Combined Work from the Application, but excluding the System Libraries of the Combined Work.

### 1.2.1.2 1. *Exception to Section 3 of the GNU GPL.*

You may convey a covered work under sections 3 and 4 of this License without being bound by section 3 of the GNU GPL.

### 1.2.1.3 2. *Conveying Modified Versions.*

If you modify a copy of the Library, and, in your modifications, a facility refers to a function or data to be supplied by an Application that uses the facility (other than as an argument passed when the facility is invoked), then you may convey a copy of the modified version:

- a) under this License, provided that you make a good faith effort to ensure that, in the event an Application does not supply the function or data, the facility still operates, and performs whatever part of its purpose remains meaningful, or
- b) under the GNU GPL, with none of the additional permissions of this License applicable to that copy.

### ***3. Object Code Incorporating Material from Library Header Files.***

The object code form of an Application may incorporate material from a header file that is part of the Library. You may convey such object code under terms of your choice, provided that, if the incorporated material is not limited to numerical parameters, data structure layouts and accessors, or small macros, inline functions and templates (ten or fewer lines in length), you do both of the following:

- a) Give prominent notice with each copy of the object code that the Library is used in it and that the Library and its use are covered by this License.
- b) Accompany the object code with a copy of the GNU GPL and this license document.

### ***4. Combined Works.***

You may convey a Combined Work under terms of your choice that, taken together, effectively do not restrict modification of the portions of the Library contained in the Combined Work and reverse engineering for debugging such modifications, if you also do each of the following:

- a) Give prominent notice with each copy of the Combined Work that the Library is used in it and that the Library and its use are covered by this License.
- b) Accompany the Combined Work with a copy of the GNU GPL and this license document.
- c) For a Combined Work that displays copyright notices during execution, include the copyright notice for the Library among these notices, as well as a reference directing the user to the copies of the GNU GPL and this license document.
- d) Do one of the following:
  - 0) Convey the Minimal Corresponding Source under the terms of this License, and the Corresponding Application Code in a form suitable for, and under terms that permit, the user to recombine or relink the Application with a modified version of the Linked Version to produce a modified Combined Work, in the manner specified by section 6 of the GNU GPL for conveying Corresponding Source.
  - 1) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (a) uses at run time a copy of the Library already present on the user's computer system, and (b) will operate properly with a modified version of the Library



that is interface-compatible with the Linked Version.

- e) Provide Installation Information, but only if you would otherwise be required to provide such information under section 6 of the GNU GPL, and only to the extent that such information is necessary to install and execute a modified version of the Combined Work produced by recombining or relinking the Application with a modified version of the Linked Version. (If you use option 4d0, the Installation Information must accompany the Minimal Corresponding Source and Corresponding Application Code. If you use option 4d1, you must provide the Installation Information in the manner specified by section 6 of the GNU GPL for conveying Corresponding Source.)

## **5. Combined Libraries.**

You may place library facilities that are a work based on the Library side by side in a single library together with other library facilities that are not Applications and are not covered by this License, and convey such a combined library under terms of your choice, if you do both of the following:

- a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities, conveyed under the terms of this License.
- b) Give prominent notice with the combined library that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.

## **6. Revised Versions of the GNU Lesser General Public License.**

The Free Software Foundation may publish revised and/or new versions of the GNU Lesser General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Library as you received it specifies that a certain numbered version of the GNU Lesser General Public License “or any later version” applies to it, you have the option of following the terms and conditions either of that published version or of any later version published by the Free Software Foundation. If the Library as you received it does not specify a version number of the GNU Lesser General Public License, you may choose any version of the GNU Lesser General Public License ever published by the Free Software Foundation.

If the Library as you received it specifies that a proxy can decide whether future versions of the GNU Lesser General Public License shall apply, that proxy's public statement of acceptance of any version is permanent authorization for you to choose that version for the Library.

Other brands, product names, and company names are trademarks of their respective holders, and are used for identification purpose only.



## 1.3 MPEG Disclaimers

### 1.3.1 MPEGLA MPEG2 Patent

ANY USE OF THIS PRODUCT IN ANY MANNER OTHER THAN PERSONAL USE THAT COMPLIES WITH THE MPEG-2 STANDARD FOR ENCODING VIDEO INFORMATION FOR PACKAGED MEDIA IS EXPRESSLY PROHIBITED WITHOUT A LICENSE UNDER APPLICABLE PATENTS IN THE MPEG-2 PATENT PORTFOLIO, WHICH LICENSE IS AVAILABLE FROM MPEG LA, LLC, 4600 S. Ulster Street, Suite 400, Denver, Colorado 80237 U.S.A.

### 1.3.2 MPEGLA MPEG4 VISUAL

THIS PRODUCT IS LICENSED UNDER THE MPEG-4 VISUAL PATENT PORTFOLIO LICENSE FOR THE PERSONAL AND NON-COMMERCIAL USE OF A CONSUMER FOR (i) ENCODING VIDEO IN COMPLIANCE WITH THE MPEG-4 VISUAL STANDARD ("MPEG-4 VIDEO") AND/OR (ii) DECODING MPEG-4 VIDEO THAT WAS ENCODED BY A CONSUMER ENGAGED IN A PERSONAL AND NON-COMMERCIAL ACTIVITY AND/OR WAS OBTAINED FROM A VIDEO PROVIDER LICENSE IS GRANTED OR SHALL BE IMPLIED FOR ANY OTHER USE. ADDITIONAL INFORMATION INCLUDING THAT RELATING TO PROMOTIONAL, INTERNAL AND COMMERCIAL USES AND LICENSING MAY BE OBTAINED FROM MPEG LA, LLC. SEE [HTTP://WWW.MPEGLA.COM](http://www.mpegla.com).

### 1.3.3 MPEGLA AVC

THIS PRODUCT IS LICENSED UNDER THE AVC PATENT PORTFOLIO LICENSE FOR THE PERSONAL USE OF A CONSUMER OR OTHER USES IN WHICH IT DOES NOT RECEIVE REMUNERATION TO (i) ENCODE VIDEO IN COMPLIANCE WITH THE AVC STANDARD ("AVC VIDEO") AND/OR (ii) DECODE AVC VIDEO THAT WAS ENCODED BY A CONSUMER ENGAGED IN A PERSONAL ACTIVITY AND/OR WAS OBTAINED FROM A VIDEO PROVIDER LICENSED TO PROVIDE AVC VIDEO. NO LICENSE IS GRANTED OR SHALL BE IMPLIED FOR ANY OTHER USE. ADDITIONAL INFORMATION MAY BE OBTAINED FROM MPEG LA, L.L.C. SEE [HTTP://WWW.MPEGLA.COM](http://www.mpegla.com).

### 1.3.4 MPEG4 SYSTEMS

THIS PRODUCT IS LICENSED UNDER THE MPEG-4 SYSTEMS PATENT PORTFOLIO LICENSE FOR ENCODING IN COMPLIANCE WITH THE MPEG-4 SYSTEMS STANDARD, EXCEPT THAT AN ADDITIONAL LICENSE AND PAYMENT OF ROYALTIES ARE NECESSARY FOR ENCODING IN CONNECTION WITH (i) DATA STORED OR REPLICATED IN PHYSICAL MEDIA WHICH IS PAID FOR ON A TITLE BY TITLE BASIS AND/OR (ii) DATA WHICH IS PAID FOR ON A TITLE BY TITLE BASIS AND IS TRANSMITTED TO AN END USER FOR PERMANENT STORAGE AND/OR USE.

SUCH ADDITIONAL LICENSE MAY BE OBTAINED FROM MPEG LA, LLC. SEE [HTTP://WWW.MPEGLA.COM](http://www.mpegla.com) FOR ADDITIONAL DETAILS.

## **1.4 Drastic Technologies Limited Warranty and Disclaimers**

Drastic Technologies Ltd (the Company) warrants to the original registered end user that the product will perform as stated below for a period of ninety (90) days from the date of licensing or; in the case of hardware, for a period matching the warranty period offered by the original manufacturer of said equipment.

Hardware and Media—The Product hardware components, if any, including equipment supplied but not manufactured by the Company but NOT including any third party equipment that has been substituted by the Distributor or customer for such equipment (the “Hardware”), will be free from defects in materials and workmanship under normal operating conditions and use.

### **1.4.1 Warranty Remedies**

Your sole remedies under this limited warranty are as follows:

Hardware and Media—The Company will either repair or replace (at its option) any defective Hardware component or part, or Software Media, with new or like new Hardware components or Software Media. Components may not be necessarily the same, but will be of equivalent operation and quality.

### **1.4.2 Software Updates**

Except as may be provided in a separate agreement between Drastic Technologies and You, if any, Drastic Technologies is under no obligation to maintain or support the Software and Drastic Technologies has no obligation to furnish you with any further assistance, technical support, documentation, software, update, upgrades, or information of any nature or kind.

### **1.4.3 Restrictions and Conditions of Limited Warranty**

This Limited Warranty will be void and of no force and effect if (i) Product Hardware or Software Media, or any part thereof, is damaged due to abuse, misuse, alteration, neglect, or shipping, or as a result of service or modification by a party other than the Company, or (ii) Software is modified without the written consent of the Company.

## 1.4.4 Limitations of Warranties

THE EXPRESS WARRANTIES SET FORTH IN THIS AGREEMENT ARE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. No oral or written information or advice given by the Company, its distributors, dealers or agents, shall increase the scope of this Limited Warranty or create any new warranties.

Geographical Limitation of Warranty—This limited warranty is valid only within the country in which the Product is purchased/licensed.

Limitations on Remedies—YOUR EXCLUSIVE REMEDIES, AND THE ENTIRE LIABILITY OF Drastic Technologies Ltd WITH RESPECT TO THE PRODUCT, SHALL BE AS STATED IN THIS LIMITED WARRANTY. Your sole and exclusive remedy for any and all breaches of any Limited Warranty by the Company shall be the recovery of reasonable damages which, in the aggregate, shall not exceed the total amount of the combined license fee and purchase price paid by you for the Product.

## 1.4.5 Damages

Drastic Technologies Ltd SHALL NOT BE LIABLE TO YOU FOR ANY DAMAGES, INCLUDING ANY LOST PROFITS, LOST SAVINGS, OR OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF YOUR USE OR INABILITY TO USE THE PRODUCT, OR THE BREACH OF ANY EXPRESS OR IMPLIED WARRANTY, EVEN IF THE COMPANY HAS BEEN ADVISED OF THE POSSIBILITY OF THOSE DAMAGES, OR ANY REMEDY PROVIDED FAILS OF ITS ESSENTIAL PURPOSE.

Further information regarding this limited warranty may be obtained by writing:

Drastic Technologies Ltd  
523 The Queensway, Suite 201  
Toronto, ON, M8V 1J7  
Telephone: (416) 255-5636

## 2 Introduction

This manual is for MediaReactor Workstation version 7 software from Drastic Technologies, Ltd.

### 2.1 Conventions

This manual assumes the following:

That the user knows how to operate a mouse and keyboard and perform the basic functions of Microsoft Windows, macOS or Linux operating system.

That the user is familiar with the video editing software in use.

That the user has access to technicians capable of placing the device on the network and setting up any SAN systems if necessary.

The name of a control or display present on the interface will be displayed in **bold** text.

Where a portion of the manual is referred to the name of section mentioned will be displayed in *italics*.

Certain images in this document may have been grayed out where it is useful or necessary to place indicator marks to show specific controls or displays above a darker background.

## 2.2 About MediaReactor Workstation Software

MediaReactor Workstation software provides plugin components to allow various third party applications to access supported file types in real time without a transcoding step. There is also a user directed interface called MR Lite, and there are command line components.

**MediaReactor Workstation** is a direct plugin version of Drastic's MediaReactor file translation system. Rather than having to use a separate translation step, the artist can work with incoming footage directly in their preferred creative software. MediaReactor Workstation is available on Windows 7 or greater, macOS 13 Ventura - macOS 15 Sequoia, and CentOS/Red Hat 7.4-7.8. It provides plugins for Assimilate SCRATCH/Lab, Final Cut Pro 7/Suite 3, Avid Media Composer, Adobe products, Autodesk Flame/Flare/Lustre, QuickTime and DirectShow. Many other applications that utilize the QuickTime and DirectShow interfaces are also supported.

Contemporary production workflows are able to access an ever increasing choice of acquisition, production, mezzanine and output devices and formats. Unfortunately, the proprietary nature of these media tools often leads to time consuming and potentially lossy translations of content, simply to allow other creative tools to access them.

MediaReactor Workstation was designed to alleviate this problem. MediaReactor Workstation provides access to the widest range of file formats of any single plugin package. It specializes in high quality conversion on the fly, on everything from ancient OMF JPEG to the latest camera acquisition formats from Weisscam, Phantom and ARRI. Coupled with its incredible range of file and codec support, MediaReactor Workstation provides a group of plugins that make the content directly compatible with most major editing and creative software on Mac and Windows systems.

More detailed information on MediaReactor Workstation, including related products and links to demo downloads, can be found on the product page:

[www.mediareactor.ws](http://www.mediareactor.ws)

Streamlined (lite) versions for Adobe, and for Avid, are also available.

If you are editing with Adobe products, MediaReactor Lite for Adobe provides a targeted set of the most commonly requested read and write formats for products such as Premiere, Media Encoder and After Effects. Check the product page:

[MediaReactor Lite for Adobe](#)

If you are editing with Avid products, MediaReactor Lite for Avid provides a targeted set of the most

commonly requested read and write formats for products such as Media Composer, NewsCutter and Symphony. Check the product page:

[MediaReactor Lite for Avid](#)

## 2.3 System Requirements

### 2.3.1 Recommended Environment

MediaReactor Workstation software must be installed on a system at least as powerful as the configurations listed below.

#### **Minimum Hardware Platform**

Post 2000 multi core processor capable of running the host application.

#### **Recommended Hardware Platform**

Recommend hardware from the host application vendor. Multi cores and OpenCL, Cuda and shader GPUs will be used if available, but are not absolutely required.

Demo downloads of MediaReactor Workstation software are available for the user to test their application and to confirm their workflow. Faster and more powerful hardware will provide better performance. In some cases, specific hardware will be required in order to enable resource-intensive, advanced or optional features.



## 2.4 Supported Operating Systems

 Adobe Premiere, After Effects, Media Encoder	 Filmworkz Nucoda	 Autodesk Flame	 Assimilate SCRATCH	 Avid Media Composer	 QuickTime Player, Apps	 Windows Media player, DirectShow
---	--	--	--	---	---	---

MediaReactor Workstation provides support for the three major operating systems that have well defined plugin systems (for Linux, please contract Drastic for available options). The primary plugin interfaces on macOS, Windows 32 bit and Windows 64 are:

- Autodesk Flame/Flare/Lustre import
- Assimilate SCRATCH and SCRATCH Lab SPA plugin
- Avid Media Composer AMA access plugin
- Adobe file import and export PRM plugins CS5.5/6.x and Creative Cloud 2014 64 bit
- Adobe file import and export PRM plugins CS4/5 32 bit
- Filmworkz Nucoda
- Final Cut Pro 7/Suite 3 real time access and rendered file export

The Final Cut Pro 7/Suite 3 plugin is macOS specific, but Avid and Adobe are available on both platforms allowing seamless access to content with platform independence. Drastic is dedicated to supporting as many file formats as possible on all three major operating systems and supporting all major production tools that provide a plugin interface.

### 2.4.1 macOS

MediaReactor's primary plugins under macOS are Apple's QuickTime layer and Adobe's import and export plug-ins. MediaReactor Workstation connects to QuickTime at multiple levels. It provides codecs for encoding and decoding video frames, image importers and exporters, movie importers and exporters and low level data handlers. The result is that all QuickTime enabled applications can access media as easily as a native QuickTime movie including still formats like DPX, Cineon, ARI and DNG sequences. This includes metadata, multitrack audio, multitrack video, time code, closed captioning and other tracks. All supported formats, including IPB MPEG transport streams and series of stills (that would normally require conversion) are directly available for editing in Apple, Adobe and many other third party products.

## 2.4.2 Windows 32

MediaReactor Workstation supports all four primary Windows' audio/video layers, which are: VFW (Video For Windows), DirectX/DirectShow, Apple QuickTime for Windows and Adobe import/export plugins for older Adobe products (CS5+ uses the Windows 64 version). QuickTime is the most standardized platform for media access on 32 bit Windows, and the MediaReactor Workstation connects to QuickTime on multiple levels. It provides codecs for encoding and decoding video frames, image importers, image exporters, movie importers, movie exporters and low level data handlers. The result is that all QuickTime enabled applications can access media as easily as native QuickTime movies including still formats like DPX, Cineon, ARI and DNG sequences. This includes metadata, multitrack audio, multitrack video, time code, closed captioning and other tracks. All supported formats, including IPB MPEG transport streams and series of stills (that would normally require conversion) are directly supported available for editing in Apple, Adobe and many other third party products.

For some applications, DirectShow or VFW provide the easiest or only interface for MediaReactor to file import. DirectShow allows player applications like Windows Media Player to access all the available file formats seamlessly. MediaReactor Workstation 32 also supports Adobe Creative Suite applications that run under 32 bits, including CS4 and earlier.

## 2.4.3 Windows 64

The latest production tools tend to prefer operating as 64 bit applications. MediaReactor Workstation for Windows 64 provides interfaces to these applications. Assimilate SCRATCH and SCRATCH Lab are great examples of powerful programs running on Windows 64. Drastic provides the technology to Assimilate for their CSP plugin, and MediaReactor Workstation takes that interface to a whole new level. Providing a much wider set of file formats and codecs, MediaReactor Workstation allows Assimilate's software to access almost every production file type your workflow could need.

The latest Adobe Creative Suite products, CS5 and CS5.5, are also native 64 bit applications. MediaReactor Workstation provides both import and export plugins for all of Adobe's Creative Suite tools. The plugins provide all the advanced media support and even improve on Adobe formats like MOV and MXF.

The Windows 64 bit version of MediaReactor Workstation license also allows you to install and use the Windows 32 bit version, which is fully compatible and very useful, in Windows 64 (XP, Vista or 7).

## 3 Getting Set Up

### 3.1 Installation

Here is how to install MediaReactor Workstation. Attach a standard keyboard, mouse and VGA monitor to the system. Plug the system in and turn it on.

**IMPORTANT!** Log on as Administrator. If the user name and password entered do not extend Administrator privileges, MediaReactor Workstation will not install properly. If unsure as to what level of privilege the log-on provides, consult a System Administrator.

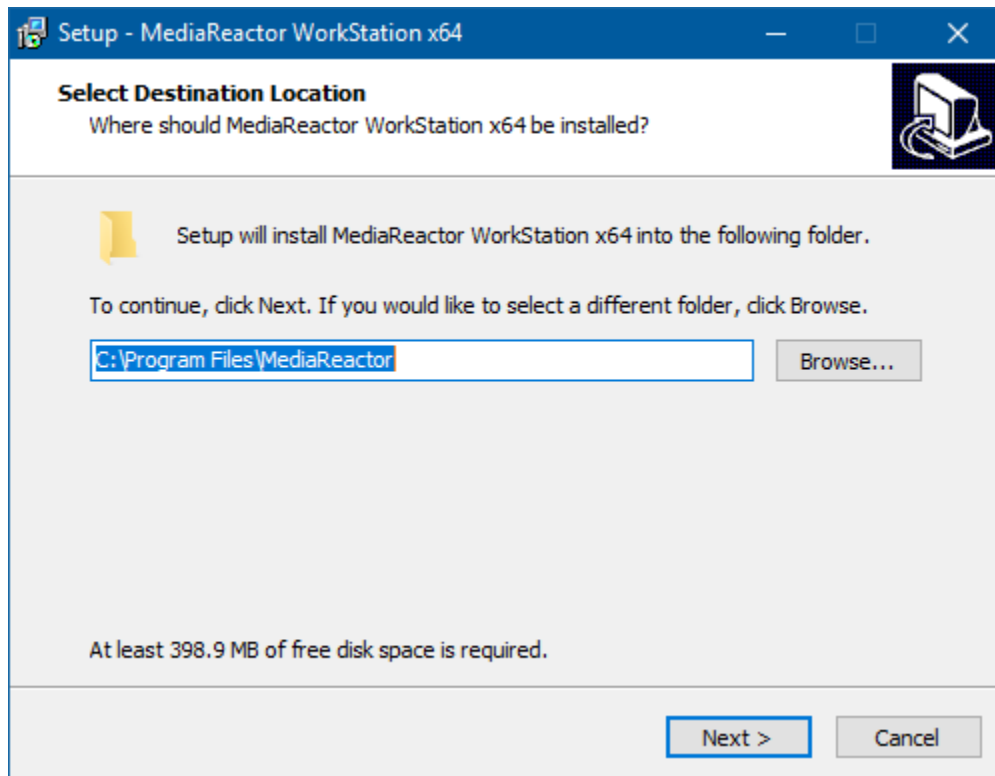
Confirm that any other programs are closed before starting this installation.

Make sure the system clock is properly set. Open the **Control Panel**, go to **Date/Time**. If the time is reset while running a duration-limited license, it may destroy the license.

**For Windows:** Double-click or run the executable MediaReactor Workstation installation file.

SetupMRWS\_Win64\_7\_#\_###.exe

Depending on your OS setup, you may need to allow the installer to run. Once you have done this, and selected the installer language, you will see a dialog similar to this:



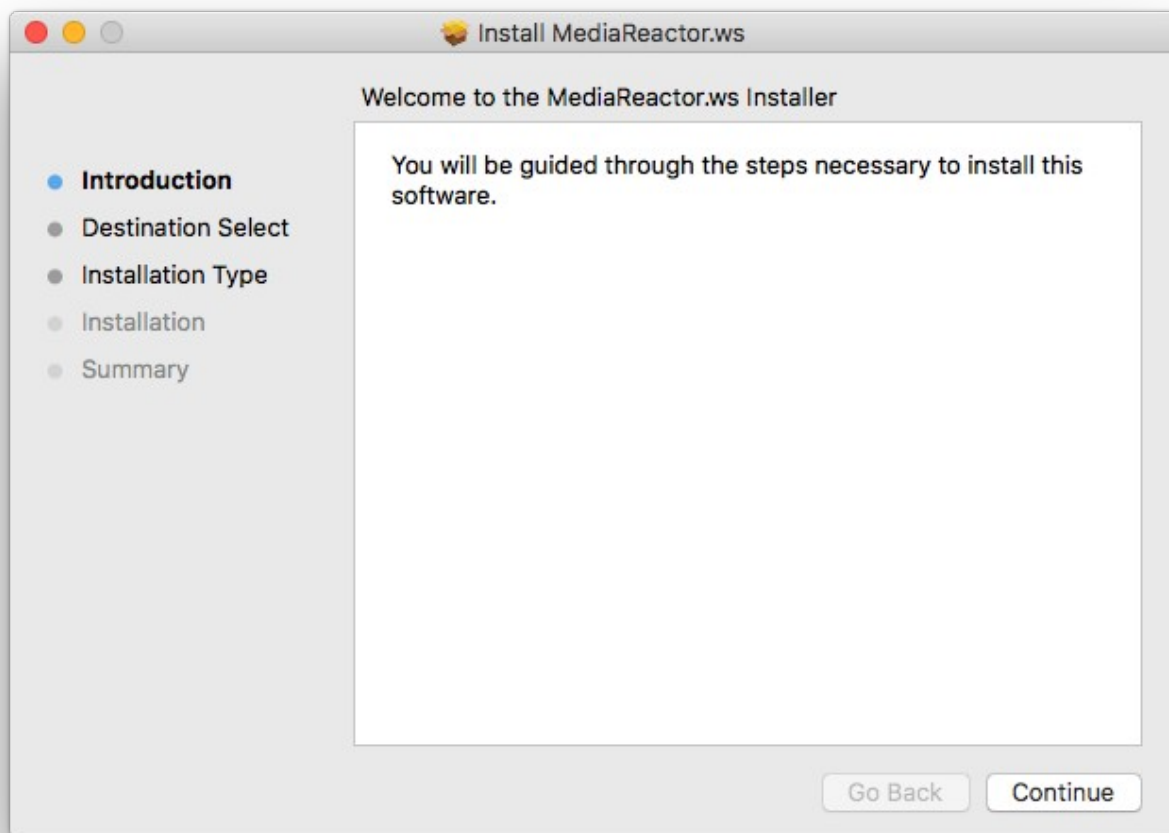
The user will be prompted to move through each step of the install by pressing the “next” or “finish” button. Carefully read the instructions that are provided.

**Note:** When installing on a Windows 64 bit system make sure to install both the 32 bit and 64 bit versions if you are also running 32 bit applications.

For macOS: Double click on the OS-X PKG installer:

SetupMRWS\_MacOS-X\_7\_#\_###

This should display a dialog similar to this:



Click **Continue** and carefully follow the instructions to install the software.

Upon install completion, MediaReactor Workstation will prompt the user to **Restart**. Agree to **Restart**.

## 3.2 Where to find your files

## 3.3 Windows

C:\Program Files\MediaReactor\

C:\ProgramData\Drastic\

Application specific plugin directories

Links to applications are available under the Start menu, MediaReactor folder

## 3.4 macOS

/Applications/MediaReactor/

/Libraries/Frameworks/

DrasticDDR.framework

Intel\_IPP.framework

Application specific plugin directories

## 3.5 Linux

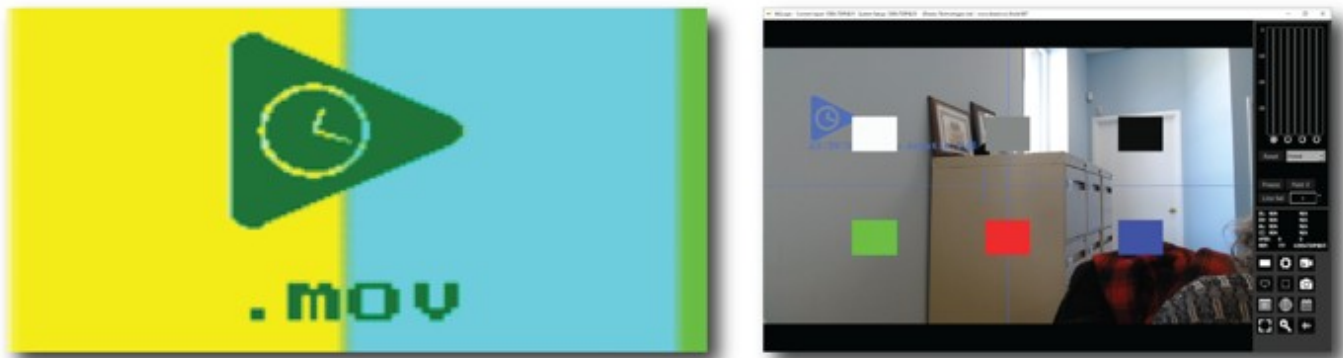
/opt/mediareactor/

Application specific plugin directories

## 3.6 License the Software

### 3.6.1 How Do I Remove the Watermarks?

If you run Drastic software without a license, many of the features will be unavailable. Also, there will be watermarks you cannot remove (image below), 10 second media duration, length of run limitations, no hardware support, nag screen, auto-shutoff, and other significant limitations. To remove these limitations, you will need a valid license.



*Sample watermarks*



Here is how to license your installation of MediaReactor Workstation:

### 3.6.2 Licensing for Windows

**MediaReactor Workstation** installs an application called **dtlicense**, which is included in the program folder. This may be accessed (in Windows installs) via the Start menu, Program Files|<Drastic Software>|dtlicense). Run dtlicense and you will see the following interface:

dtlicense (v7.0.929)

294 Trial days remain. Licensed for:

- Drastic DDR Software
- MediaReactor Software
- MediaNXS HD
- VideoQC
- VideoQCWorkStation
- Preview -PreviewPro -4KScope -SDIScope
- CC -4K -Camera Raw -Device Control
- Cineform -AVCi -DNxHD -JPEG-2000
- NXC -SCP

User Name

Email

Site Code

Site Key

*dtlicense with a trial license*

- Type the user name into the **User Name** field.
- Type a valid email address into the **User Email** field. This is the email address at which the user will receive the required site key, so make sure it can be accessed by the operator of the system upon which the Drastic software is installed.
- Press the **Generate** button. This will populate the **Site Code** field with the site code. The site code is a seemingly random string of alphanumeric characters which will be used to generate the site key.

- If the system is set up with email, the user may press the **Send** button. This opens a new email addressed to Drastic with the site code in the body of the email. If the system is not set up with email, the user may copy (either select the site code and use a standard Copy command, or press the **Copy** button which is just to the right of the **Site Code** field) and paste (use a standard Paste command) the site code into a text file, and open the text file in a system that is set up with email. In this case, create a new email addressed to [authorization@drastictech.com](mailto:authorization@drastictech.com) . it would be useful to type a quick explanation regarding which software is to be licensed, and the reason for the license request (such as demo, update license, add software etc.). Send the email.
- We will reply with an email containing another seemingly random string of alphanumeric characters - this will be the site key.
- Copy the site key from the email into the buffer, and paste it into the **Site Key** field, either using a standard paste command, or by pressing the **Paste** button (the button with the icon to the left of the **Remove** button).
- Press the **Register** button, and restart the software. This will update the license status and enable all the features supported by the requested license level.
- To view the folder in which the license is located, press the **Folder** button. This opens the folder containing the license, which may be useful in cases where the user may need to move or delete the license.
- The license may be removed simply by pressing the **Remove** button.
- Once the user is finished with the licensing process, they may press the **Close** button to close **Drastic Licensing** window.

### 3.6.3 Licensing for Linux and macOS

To access the site code using LicenseMR under **Linux**:

Open the command line and navigate to the opt/mediareactor directory i.e cd  
/opt/mediareactor

Run the license application as a super user, i.e sudo ./licensemr4

After the application is opened, fill in your username and email and click on the Generate button. This will generate the site code which you will need to send to the authorization dept to issue a site key. Paste the key in the Site Key field and click on register to activate the license.

To access the site code using LicenseMR under **macOS**:

Go to Applications and open the MediaReactor folder. In that folder will be the LicenseMR application.

After the application is opened, fill in your username and email and click on the Generate button. This will generate the site code which you will need to send to the authorization dept to issue a site key. Paste the key in the Site Key field and click on register to activate the license.

Through DDRSetup (Linux and macOS):

There is a license app installed with MediaReactor called ddrsetup. On the command line go to its directory and type:

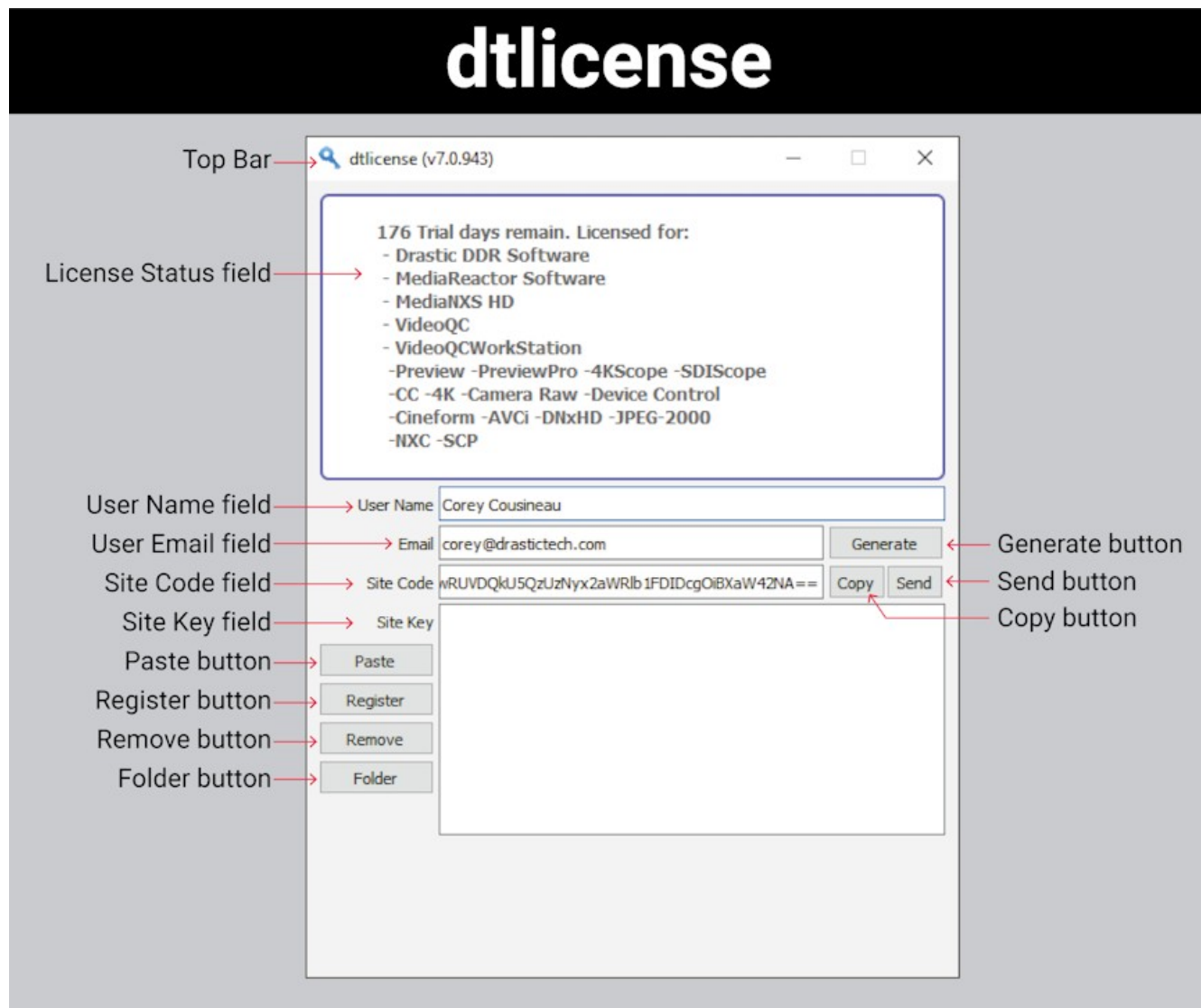
```
./ddrsetup -l -n "Your Name" -e "your.email@company.com"
```

In the command above, use the quotes.

Copy and paste the output and send it to [authorization@drastictech.com](mailto:authorization@drastictech.com). Drastic will reply with an email containing the Site Key.

## 3.7 License MediaReactor Controls and Displays

Here is the License MediaReactor interface.



## 4 Using MediaReactor Workstation

MediaReactor Workstation is designed to provide direct, real time editing of non editor native formats for Adobe, Avid, Apple, Autodesk, Nucoda, Assimilate, and other QuickTime or DirectShow based products.

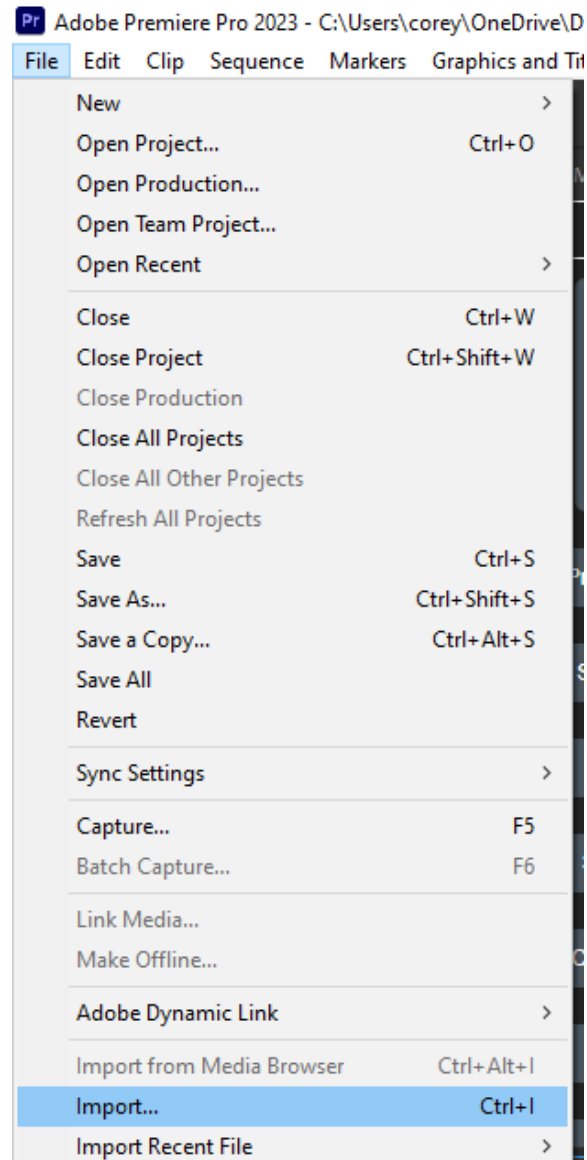
MediaReactor Workstation installs a series of plugins which allow editors to add media (which would normally have required a transcoding step) directly into their editing package, and use the media as if it were a natively understood format.

For specific applications there are also command line components available for use.


**NOTE:** When outputting Panasonic P2 formats, a CONTENTS and a series of subdirectories are created to contain the file – these are not created in the selected directory.

## 4.1 ...with Adobe Premiere CC

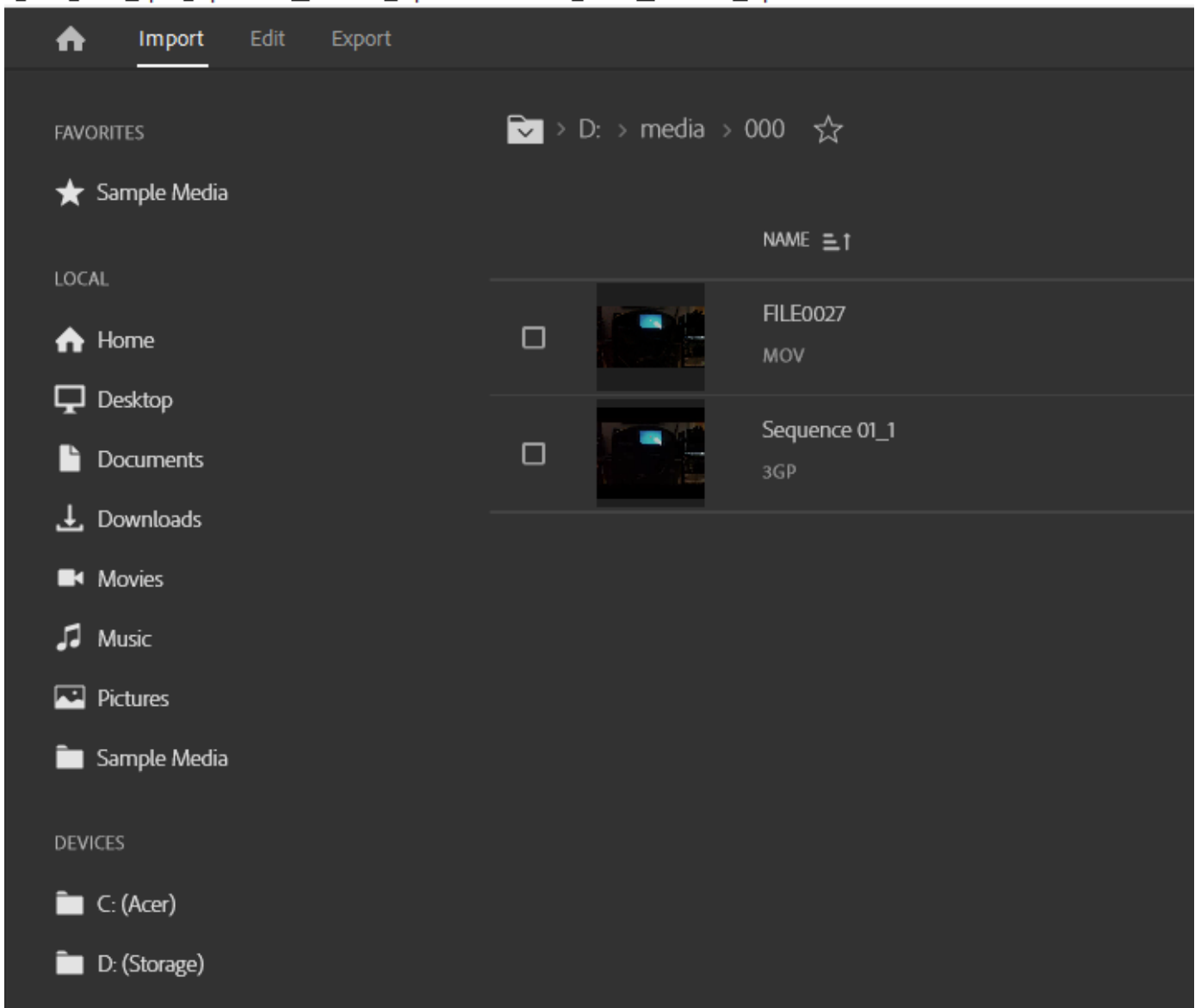
To bring a file into Premiere for editing, select the menu **File | Import** or right click in the Project area and select **Import**.



Adding files via the Media Browser area is also supported.

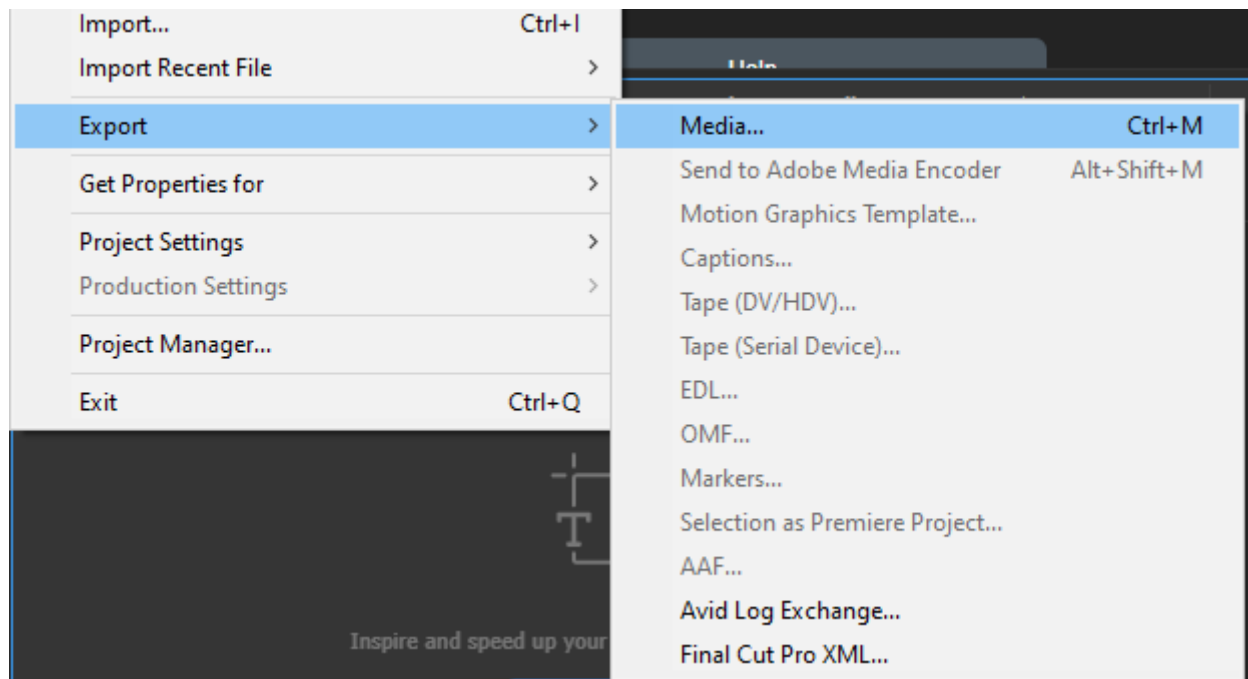
 Adobe Premiere Pro 2023 - C:\Users\corey\OneDrive\Documents\Adobe\Premiere Pro\22.0\speculum.prproj

File Edit Clip Sequence Markers Graphics and Titles View Window Help

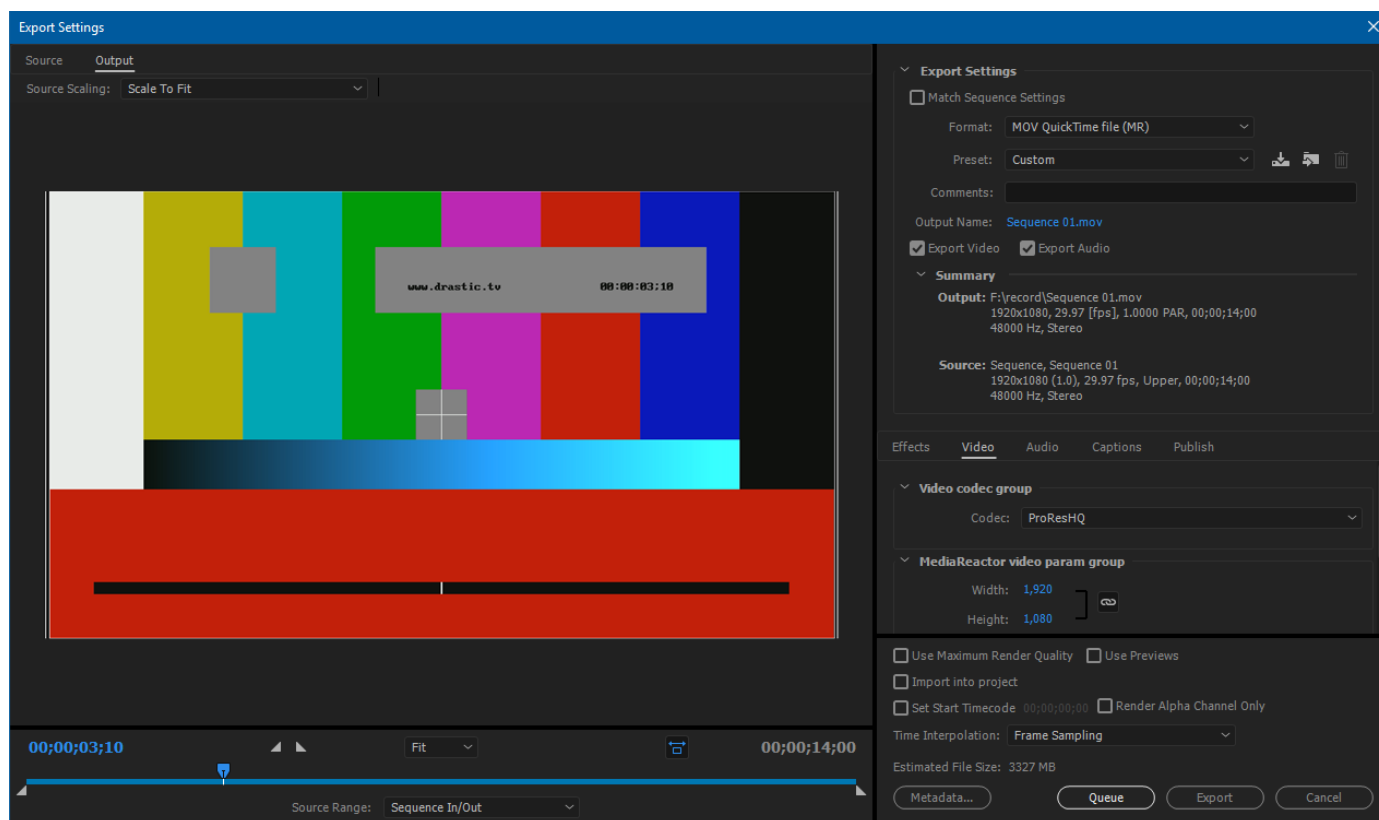




To export a file from Premiere, select the menu **File | Export → Media**.



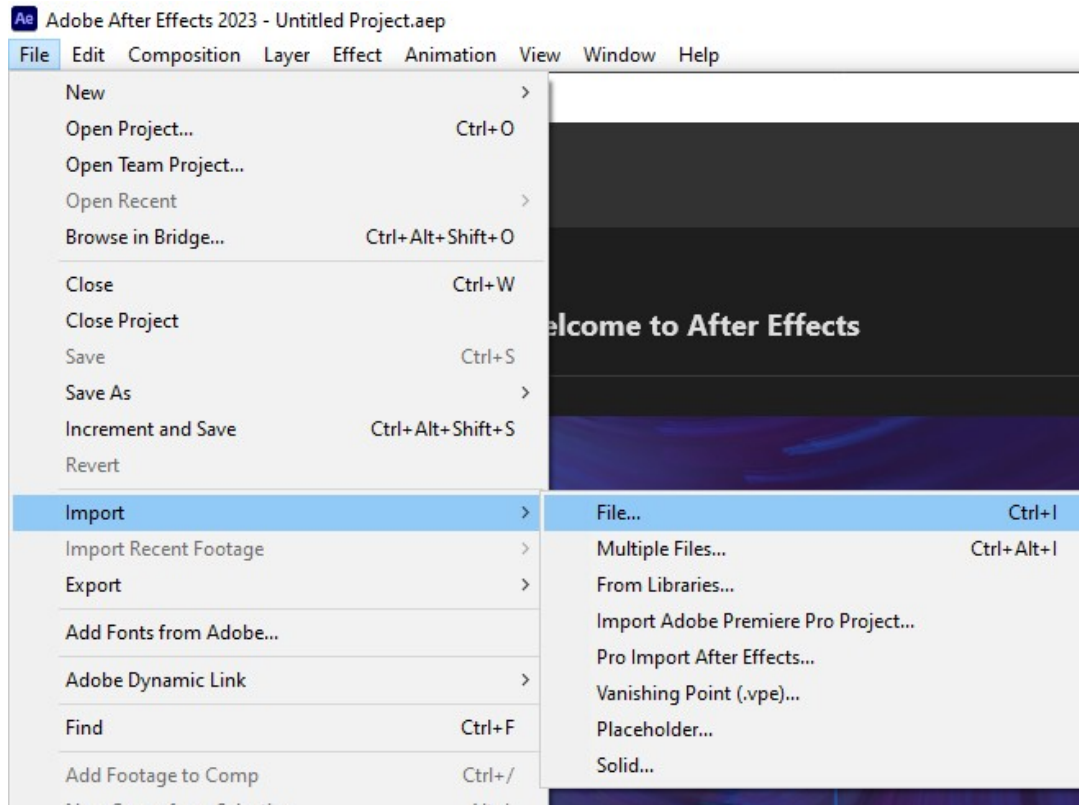
This loads the file into the dialog box.



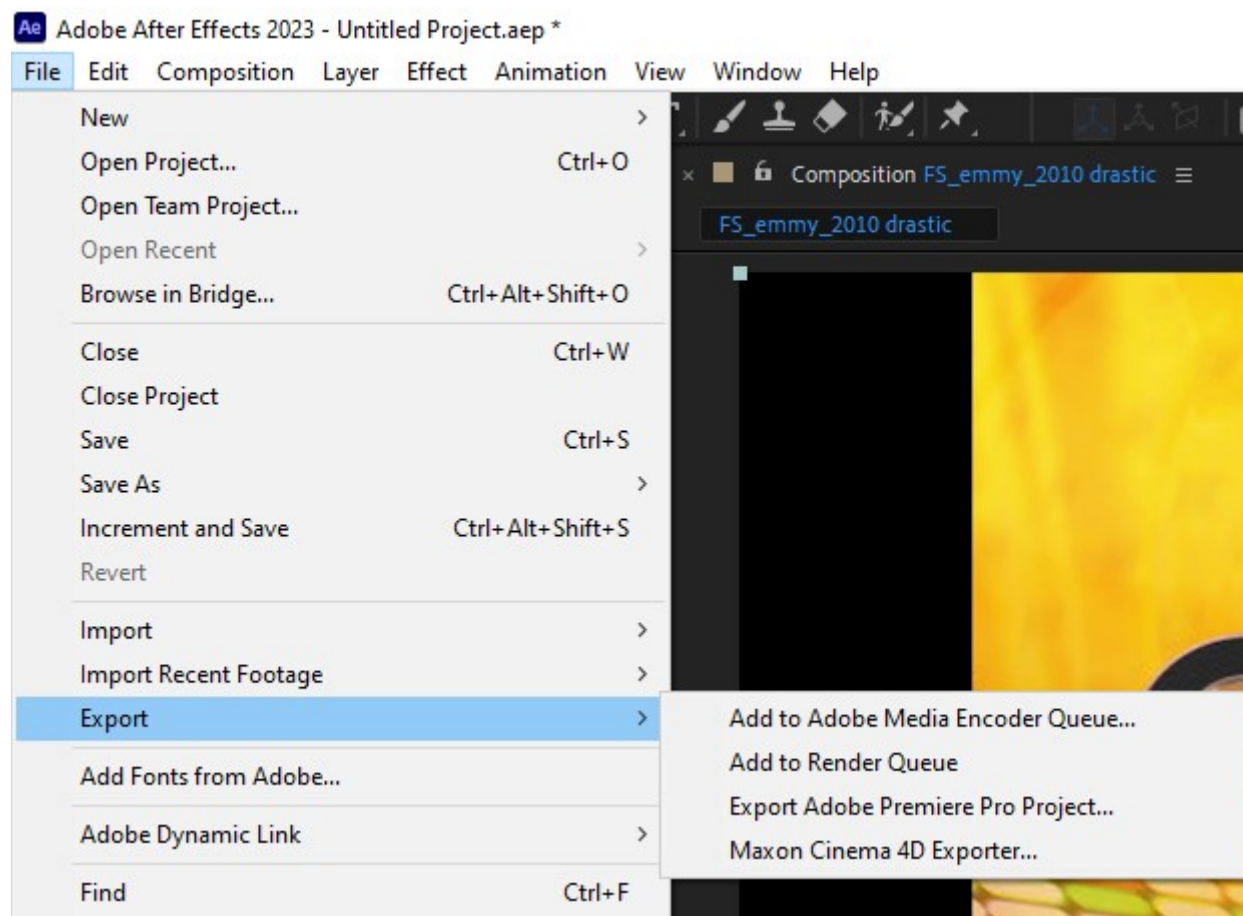
Select the Format drop down to select the type. Set the settings and click the **Export** button.

## 4.2 ...with Adobe After Effects CC

To bring a file into After Effects for editing, select the menu **File | Import** or right click in the Project area and select **Import**.



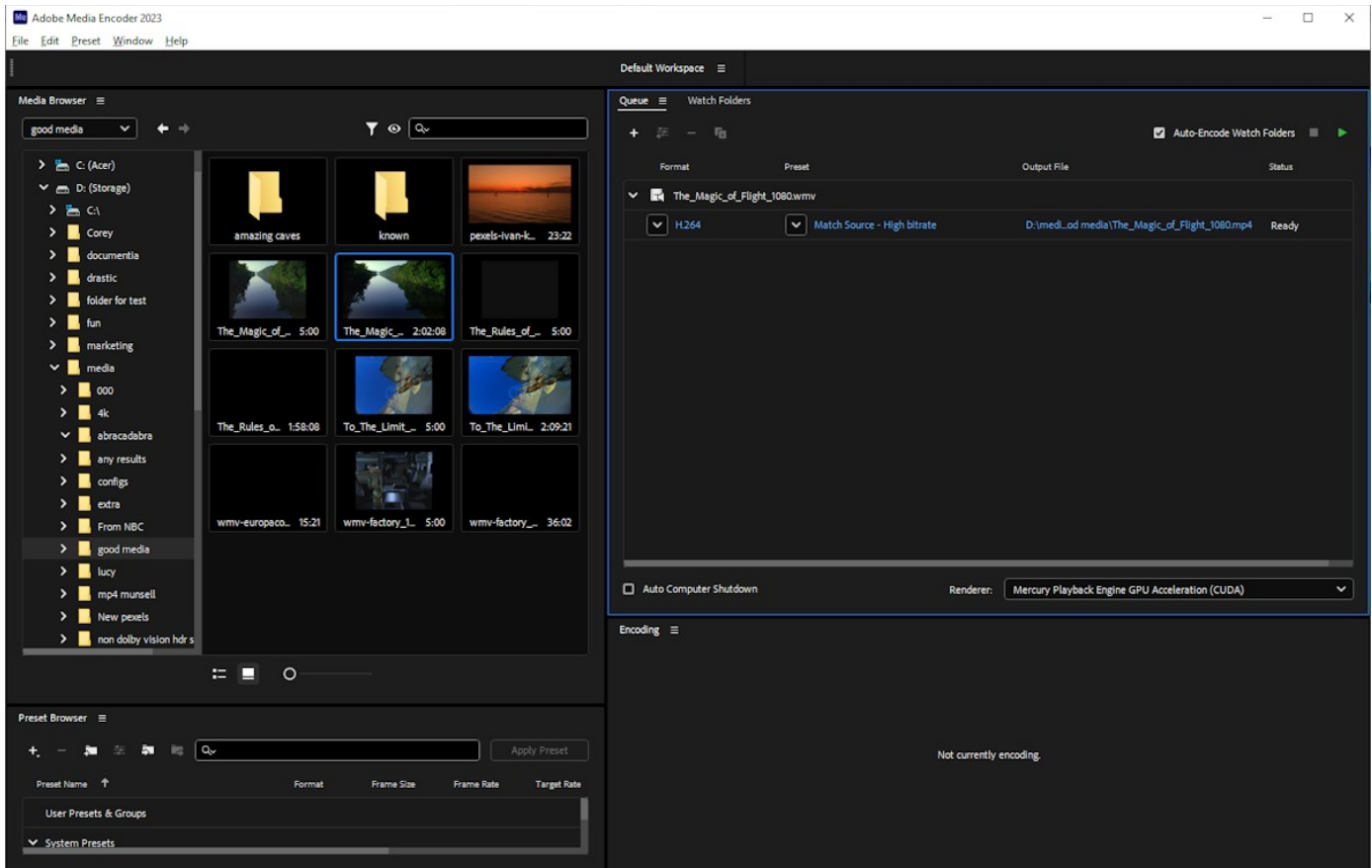
To Export a project via MediaReactor, select the File and Export menu



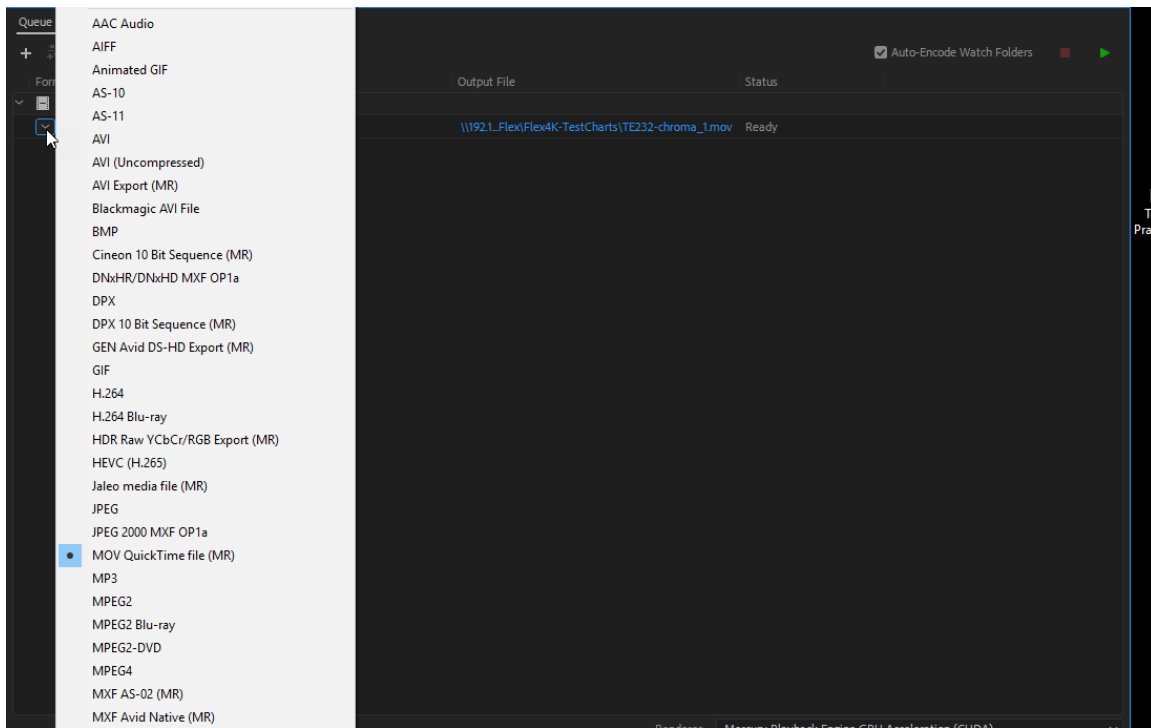
For more information on exporting, see the *Premiere CC* or *Media Encoder CC* sections of this manual.

## 4.3 ...with Adobe Media Encoder CC

In Media Encoder, use the Media Browsers to find the file you want to convert.



Double click on the file to add it to the Queue. Click on the first drop down to select the output file type.

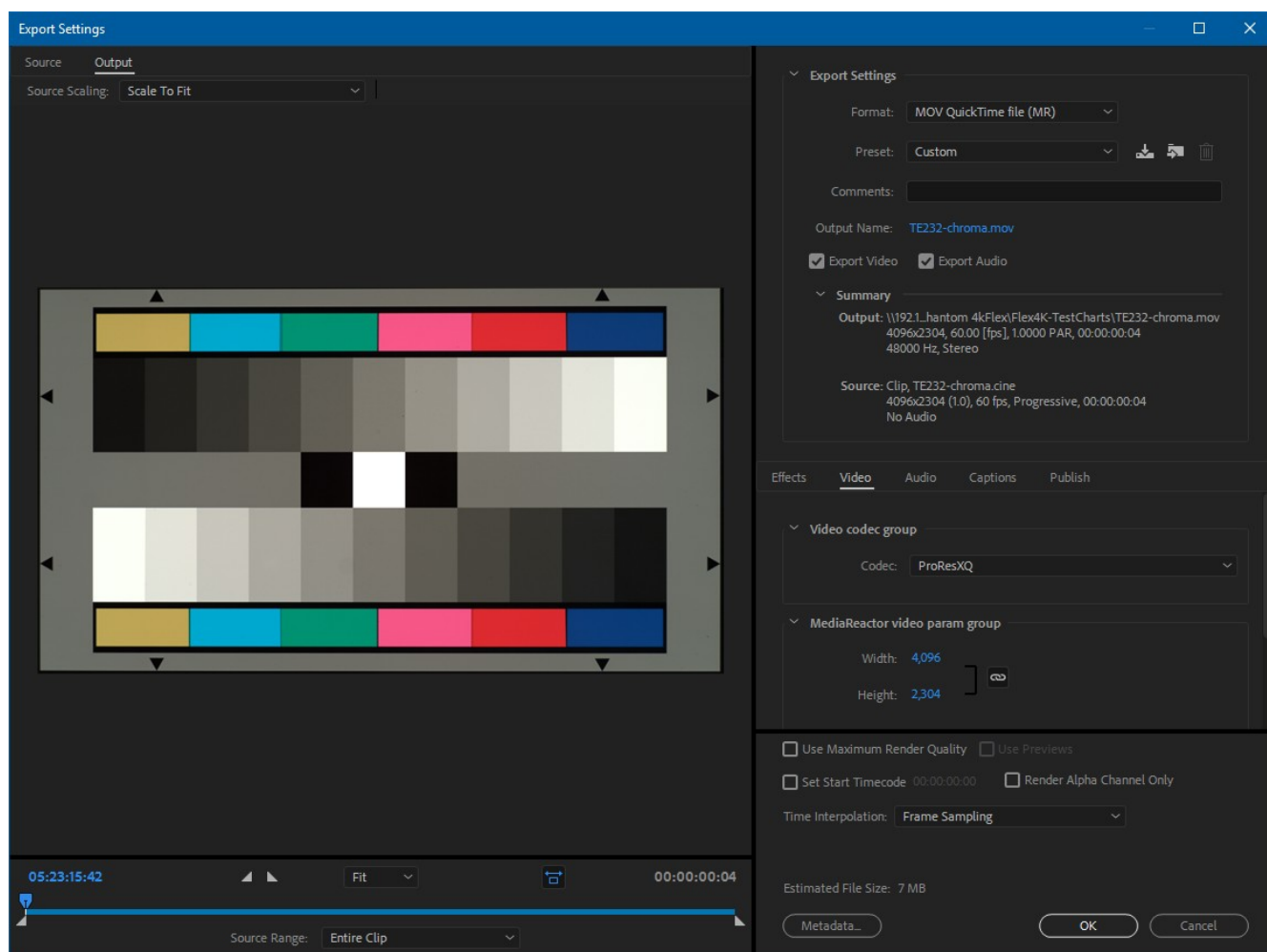


Once you have selected the output file type, clicking on the Output link will bring up the Export settings dialog.

To export a file from Premiere, select the menu **File | Export → Media**.

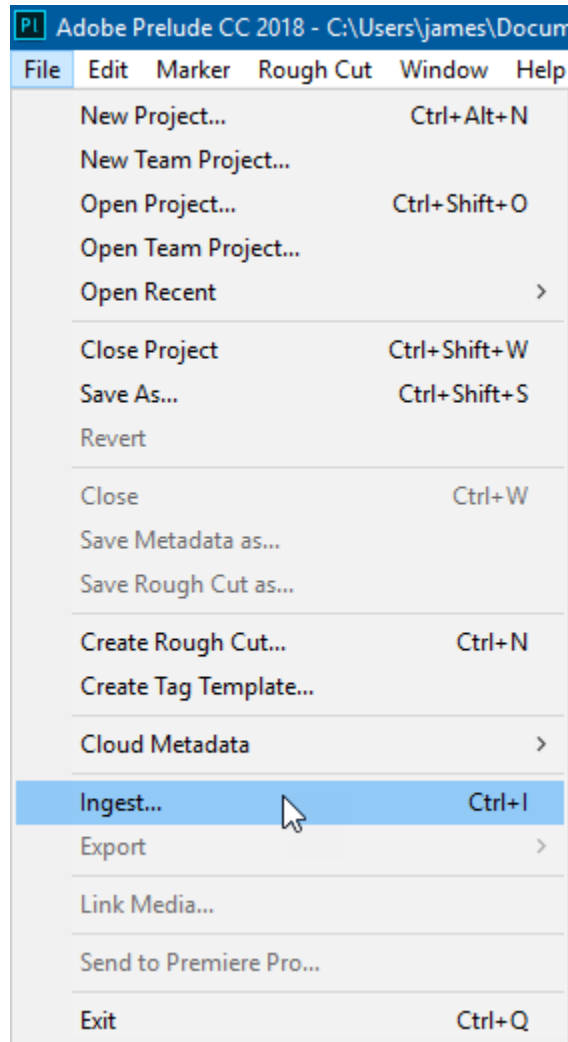
This loads the file into the dialog box.

Select the Format drop down to select the type. Adjust or confirm the settings and click the **Export** button.



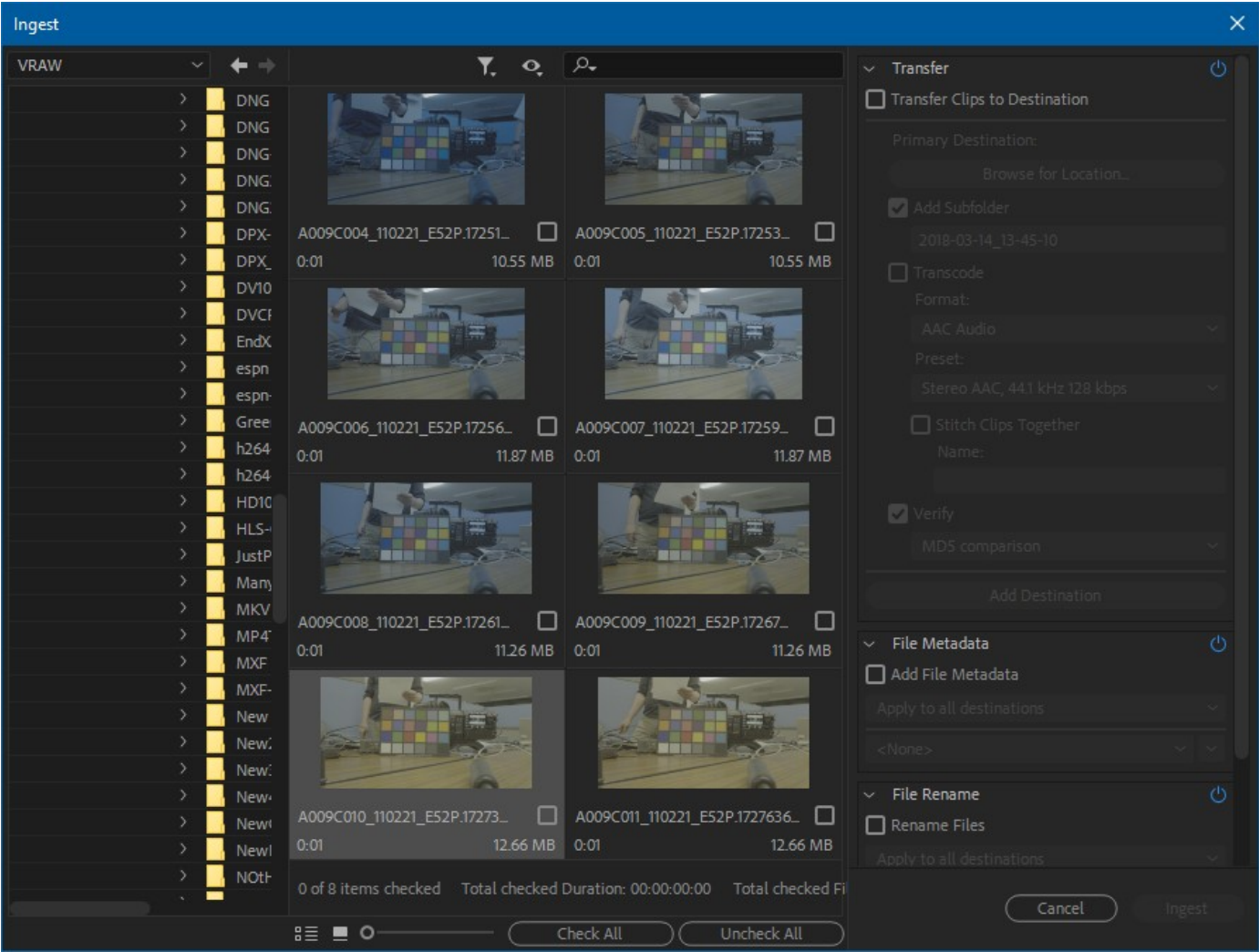
## 4.4 ...with Adobe Prelude CC (deprecated)

To bring a file into Prelude for logging, select the menu **File | Ingest** or double click in the Project area.

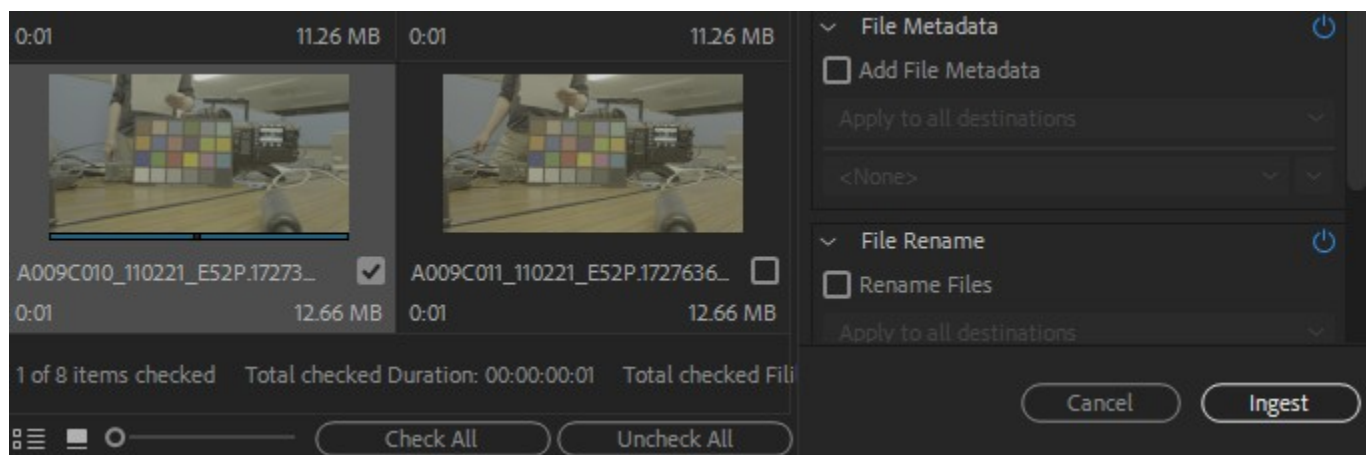




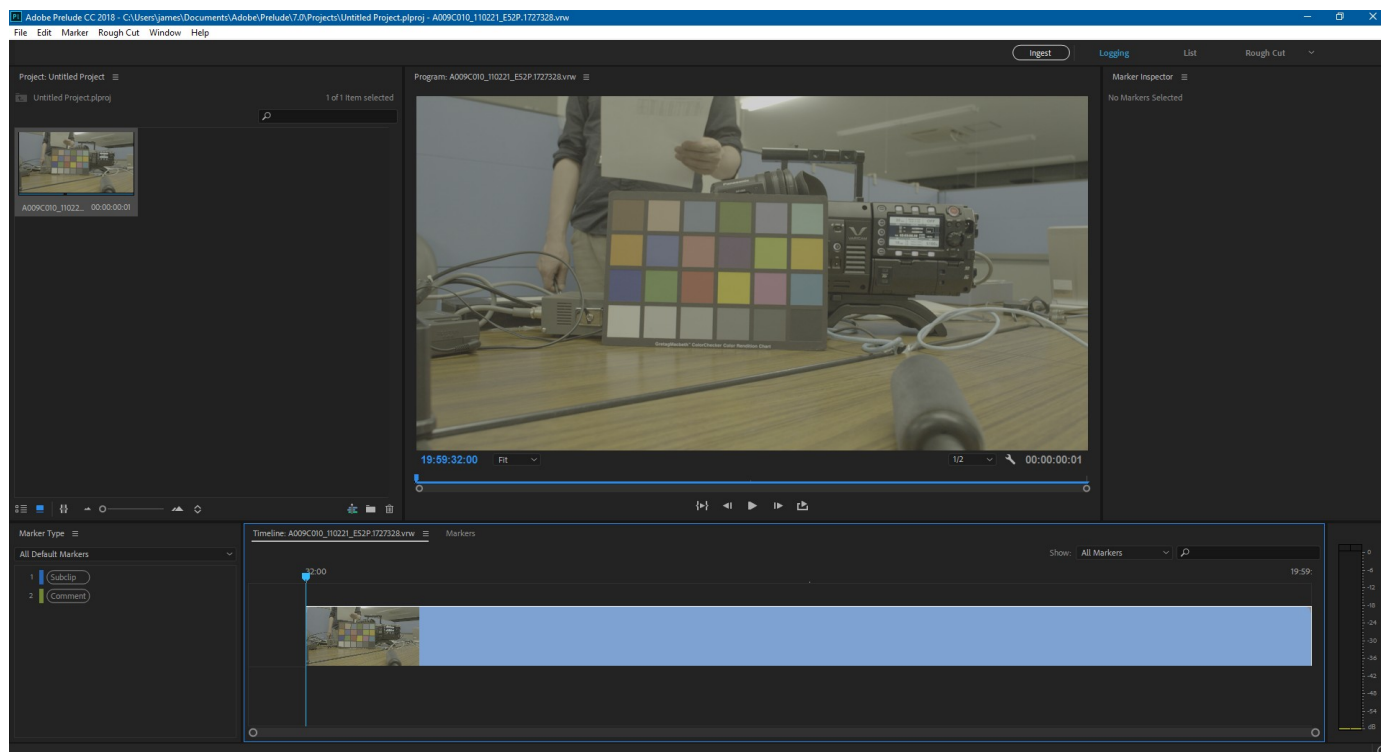
This will bring up the ingest dialog



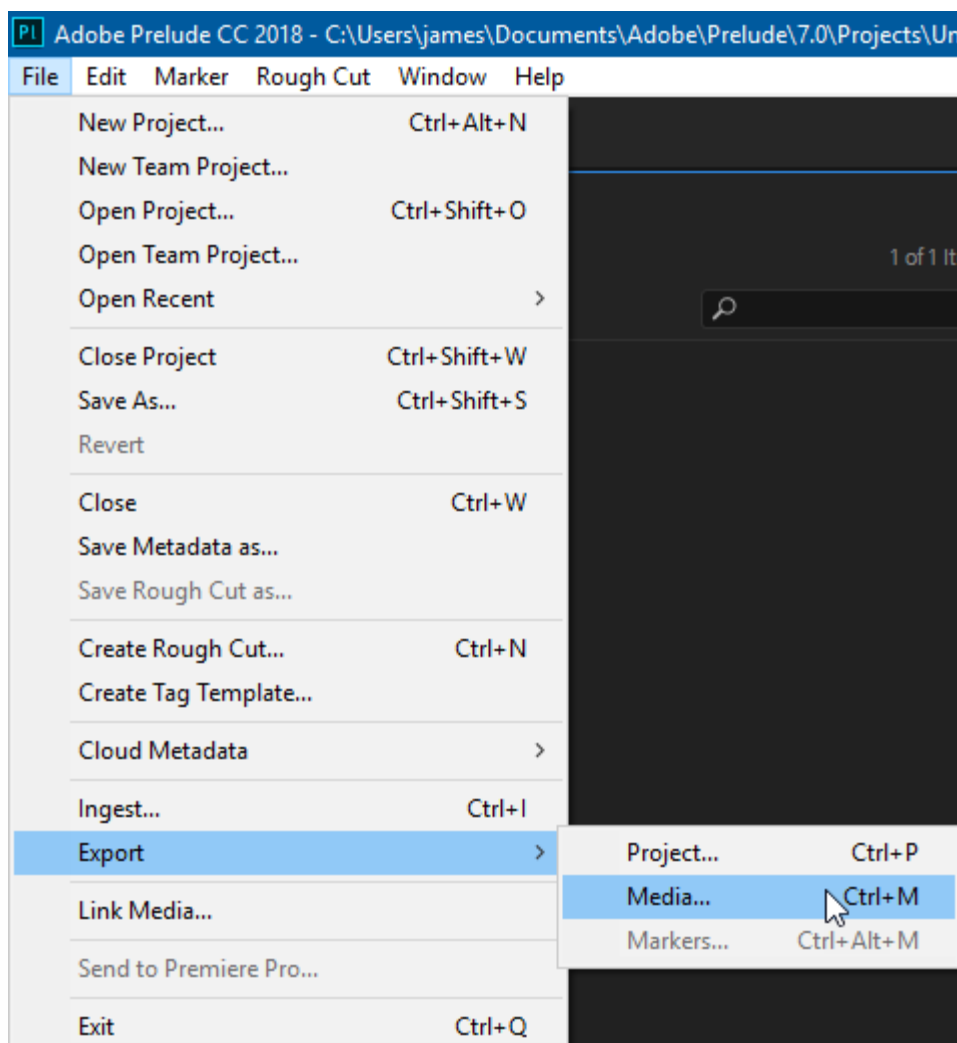
Checking one or more of the files, and clicking **Ingest** will bring the files into Prelude



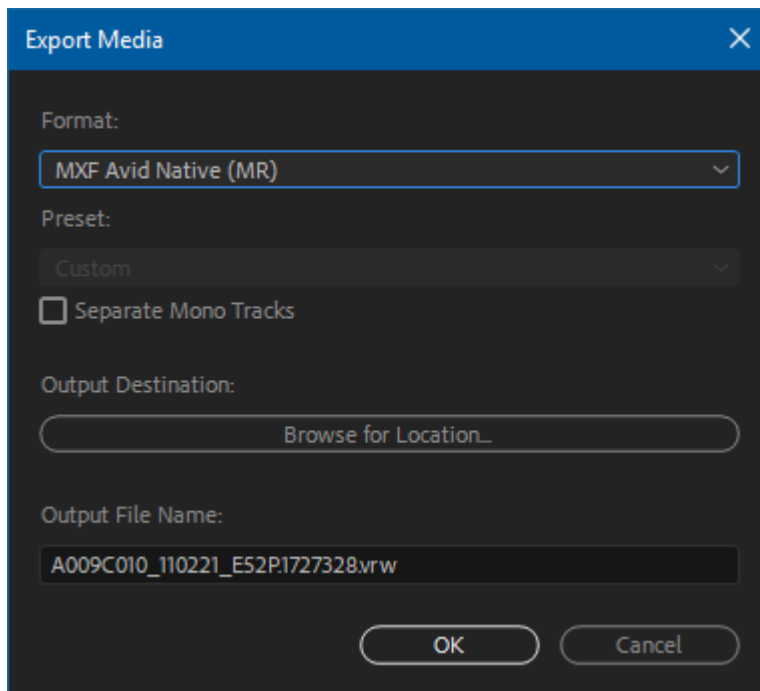
Once it is imported into the project, double clicking on its icon will bring it up in the player and timeline.



Clicking on the clip in the project will also allow you to export it as another format

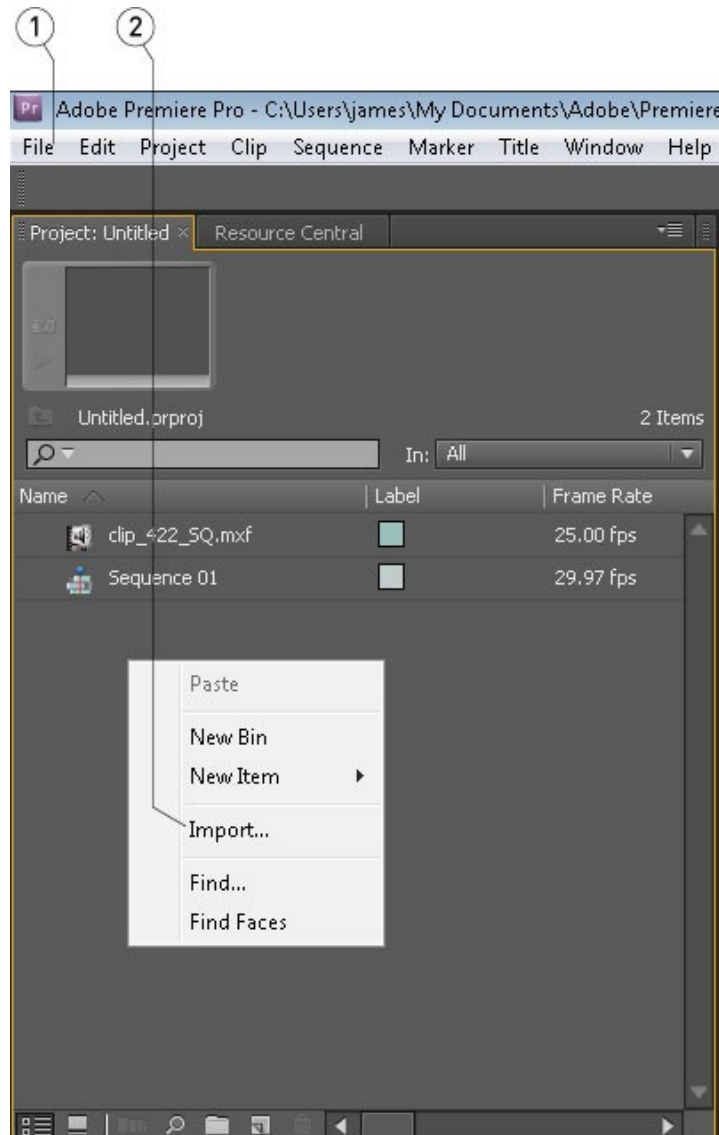


The export type can be chosen in the Export Media dialog



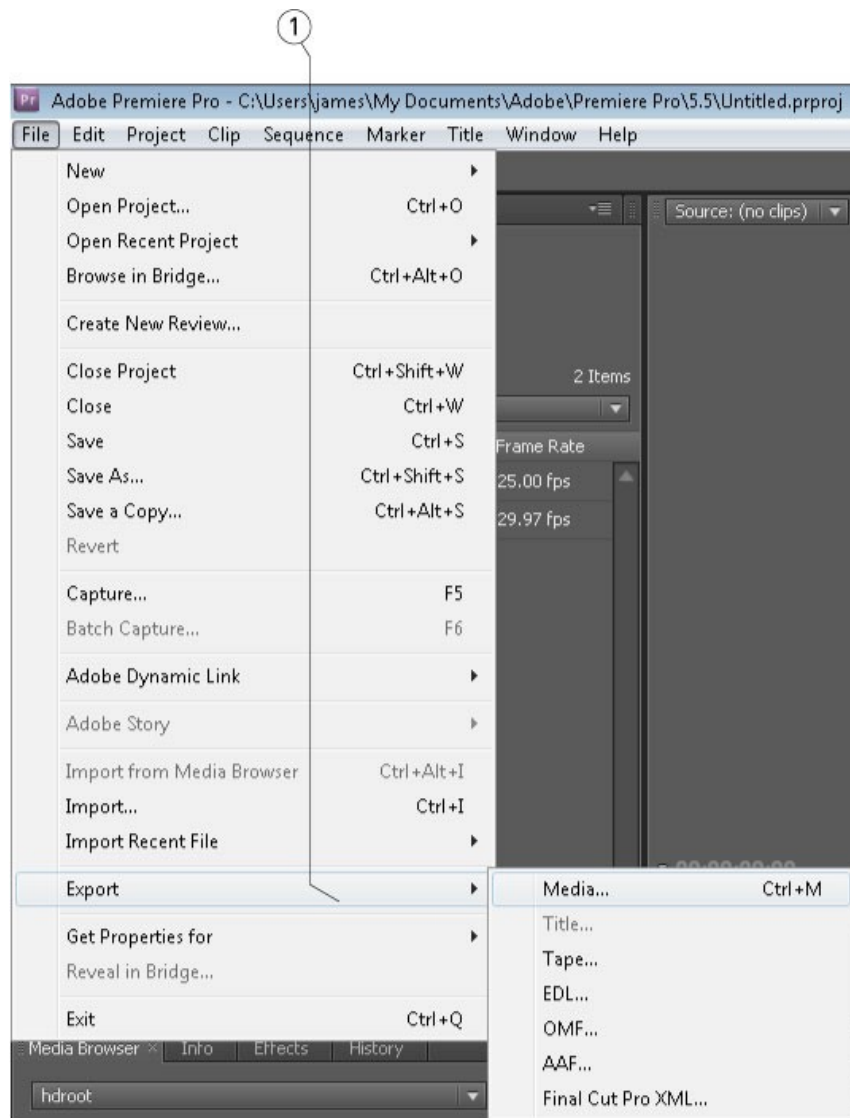
## 4.5 ...with Adobe Premiere CS5/6

To bring a file into Premiere for editing, select the menu **File | Import** (1) or right click in the Project area and select **Import** (2).

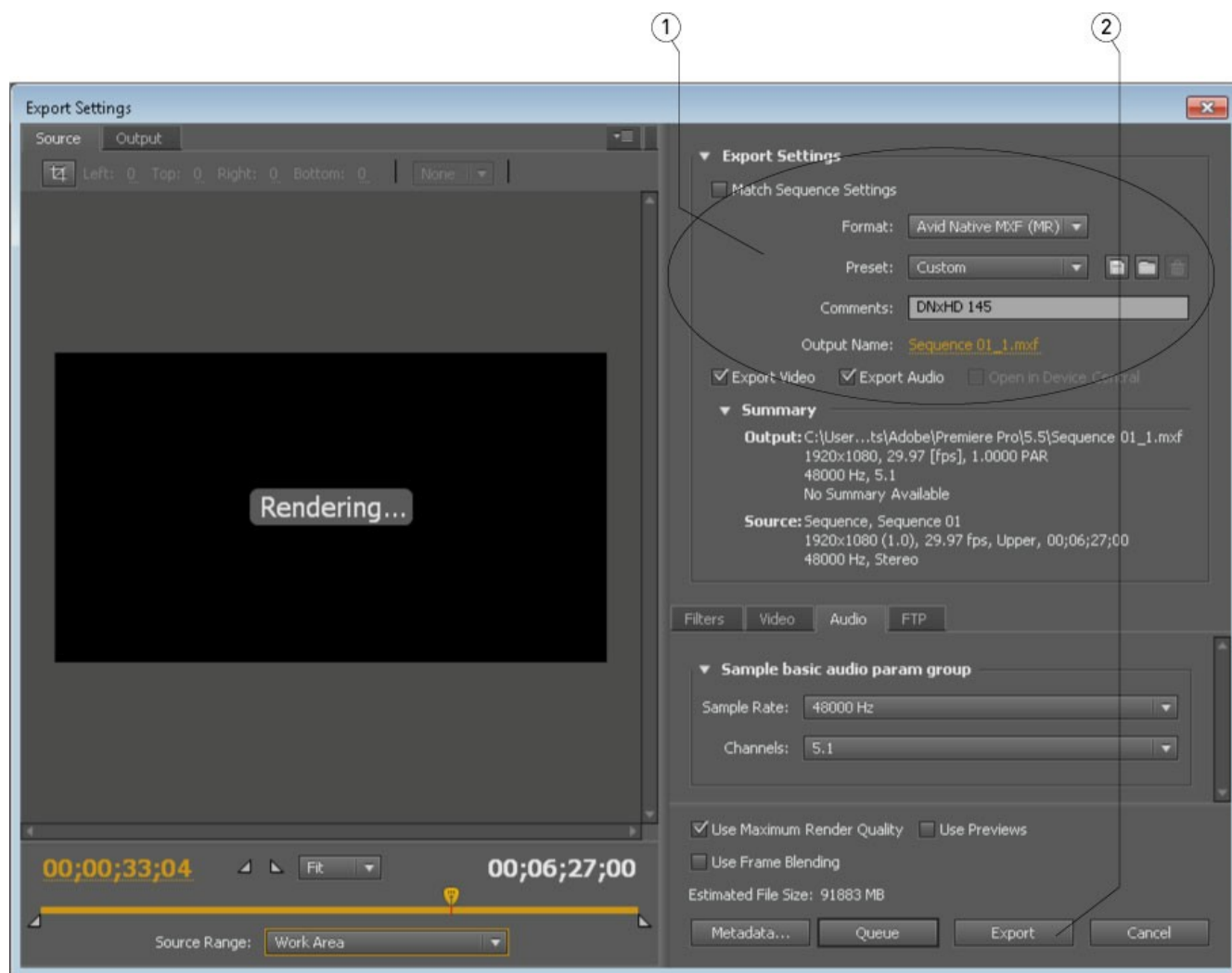


Adding files via the Media Browser area is also supported.

To export a file from Premiere, select the menu **File | Export → Media (1)**.



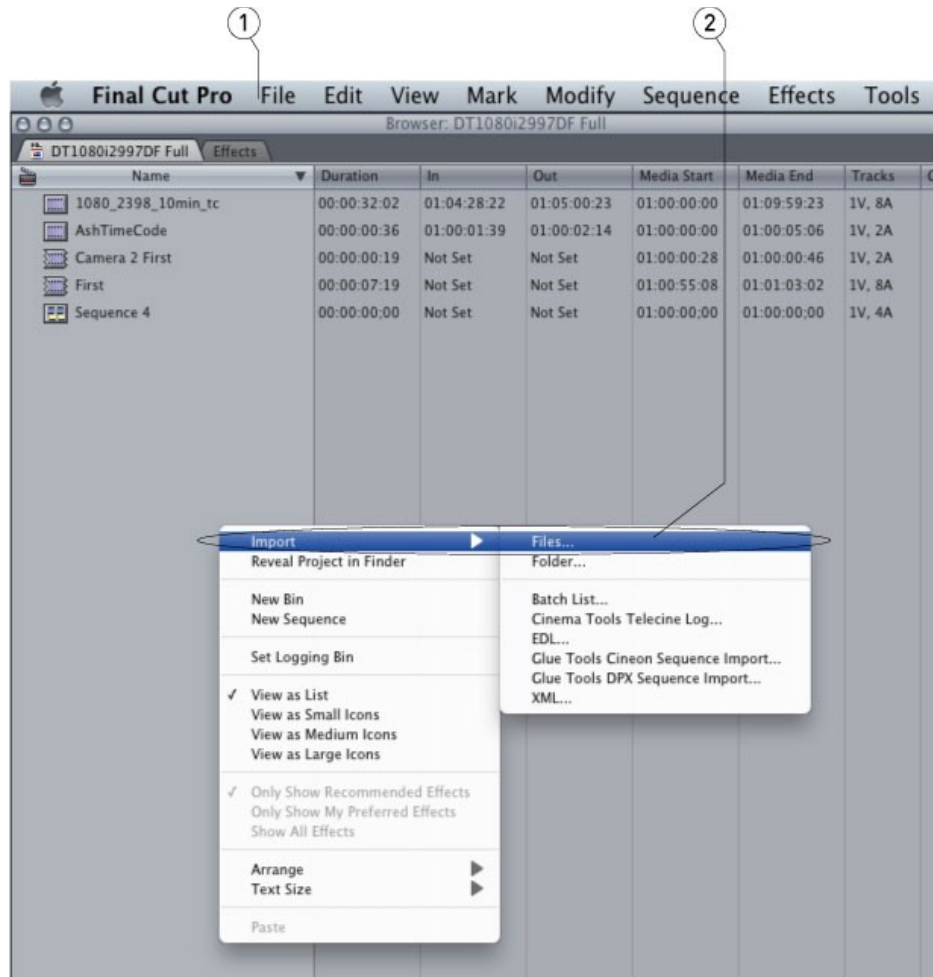
This loads the file into the dialog box.



Select the **Format** drop down (1) to select the type. Set the settings and click the **Export** button (2).

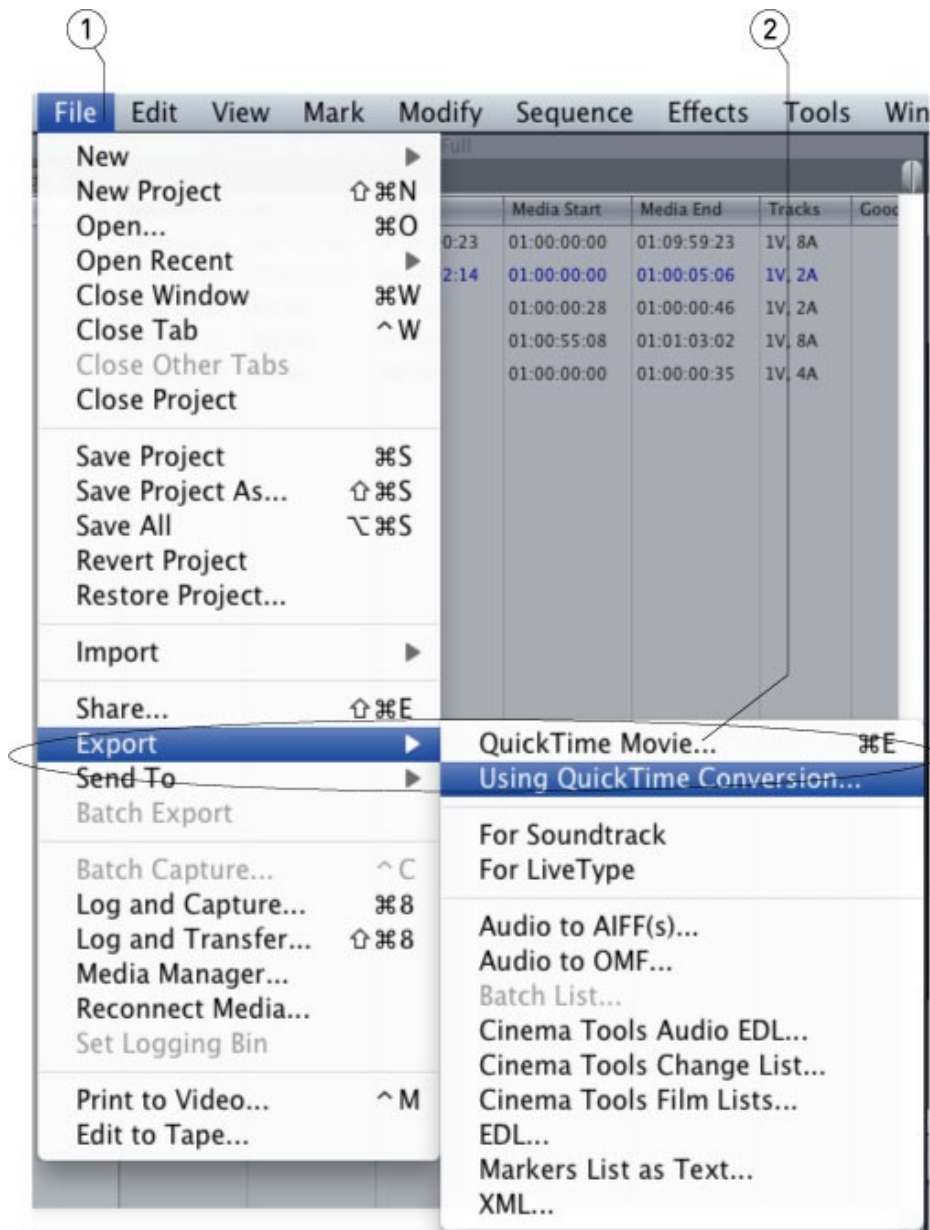
## 4.6 ...with Apple Final Cut Pro (Suite 3/7)

To bring a file into FCP for editing, go to the **File** menu and select **Import** (1). Alternately, right click on the bin and select **Import->Files** (2). Browse to the file and select it.

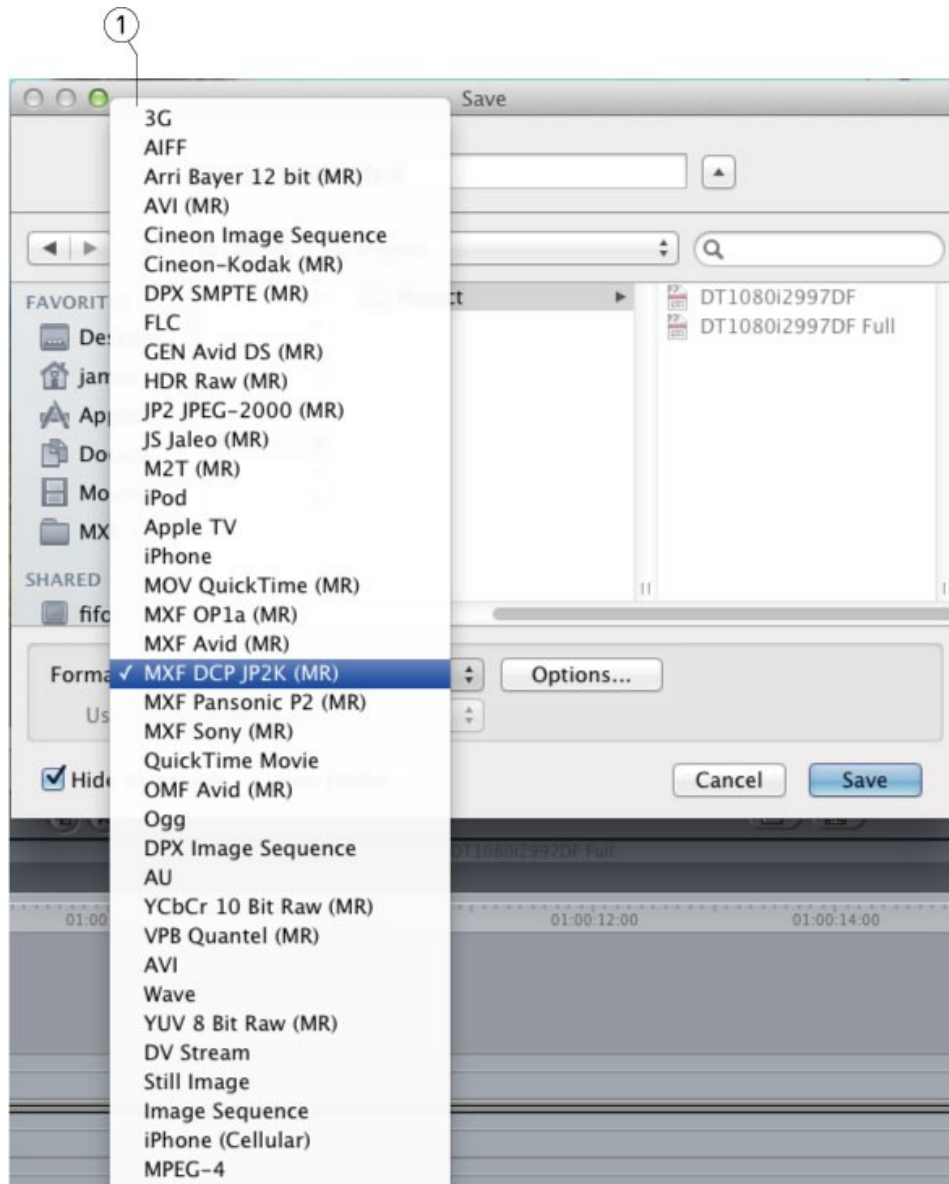




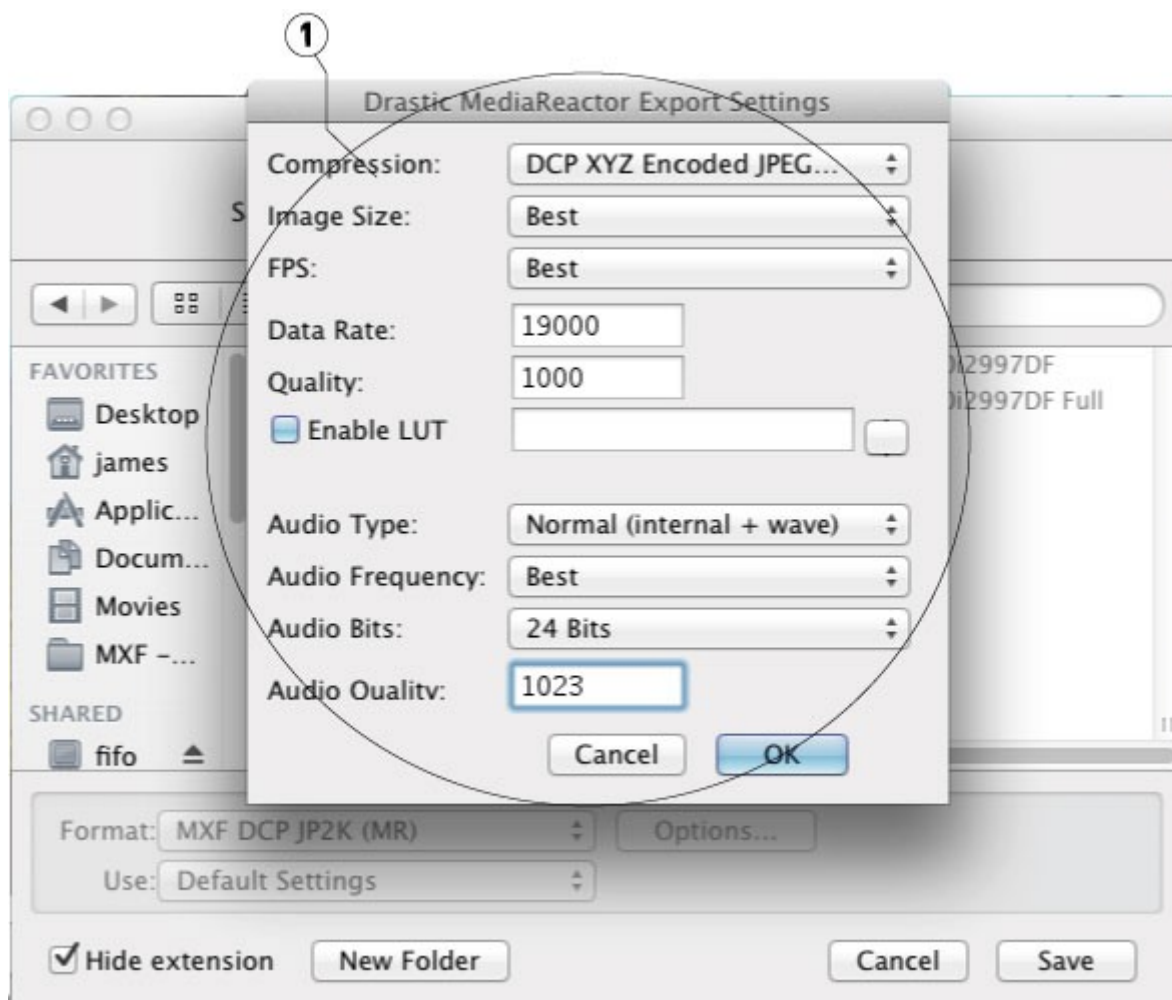
To export a file from FCP, click on the sequence you want to export. Select the **File** menu (1), then **Export->Using QuickTime Conversion...** (2).



Open the **Format** list box and select the output type you want (1).



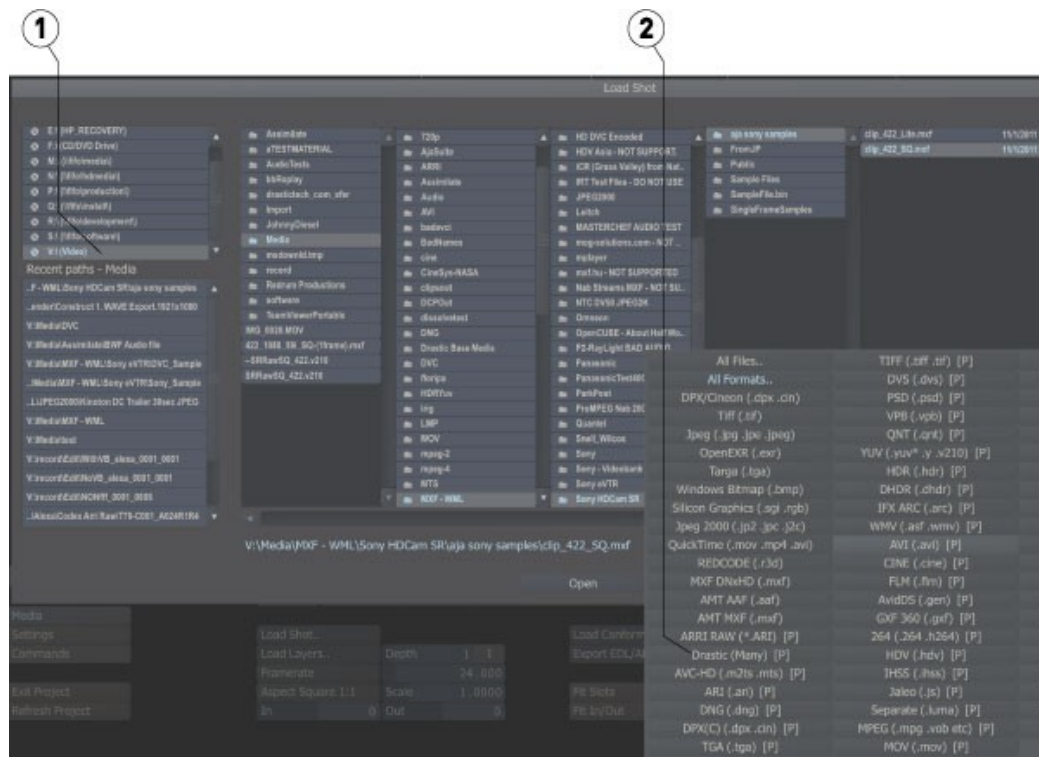
Click the **Options** button to set the options.



Set the name and add the correct extension (FCP will not do this for you). Click **Save** to export the sequence.

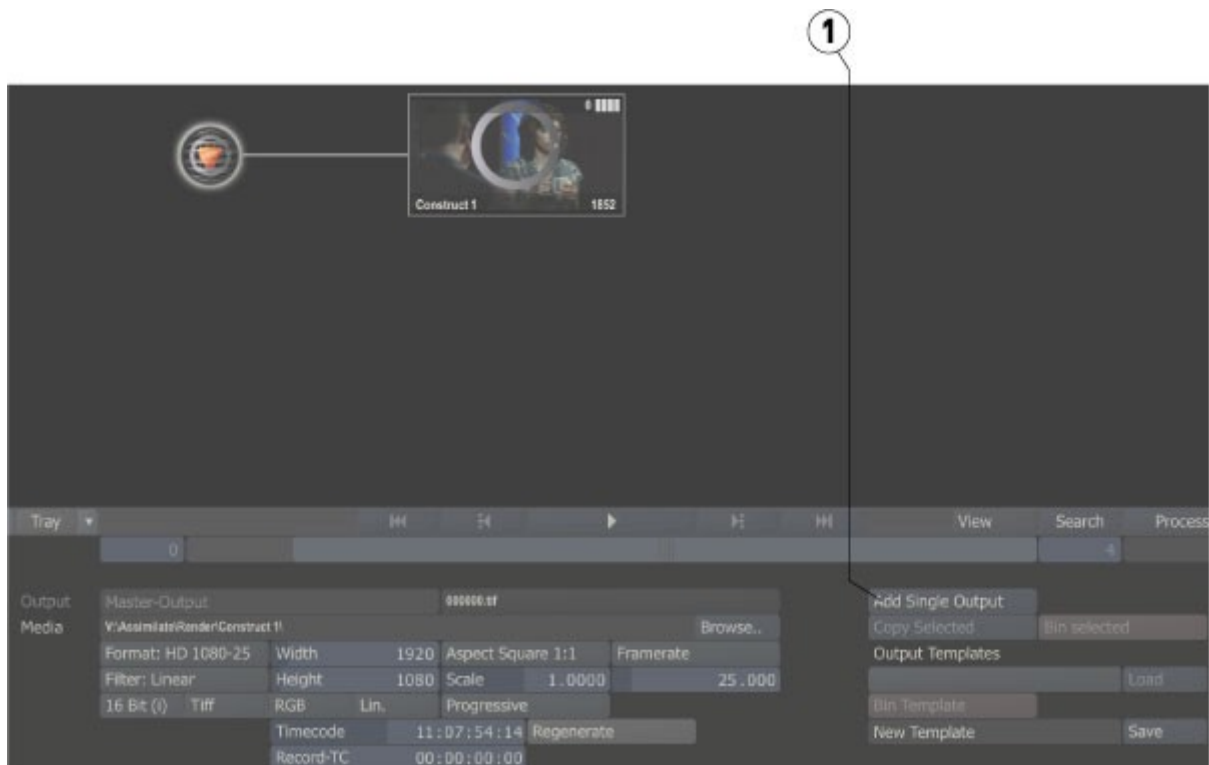
## MediaReactor Workstation v7

56



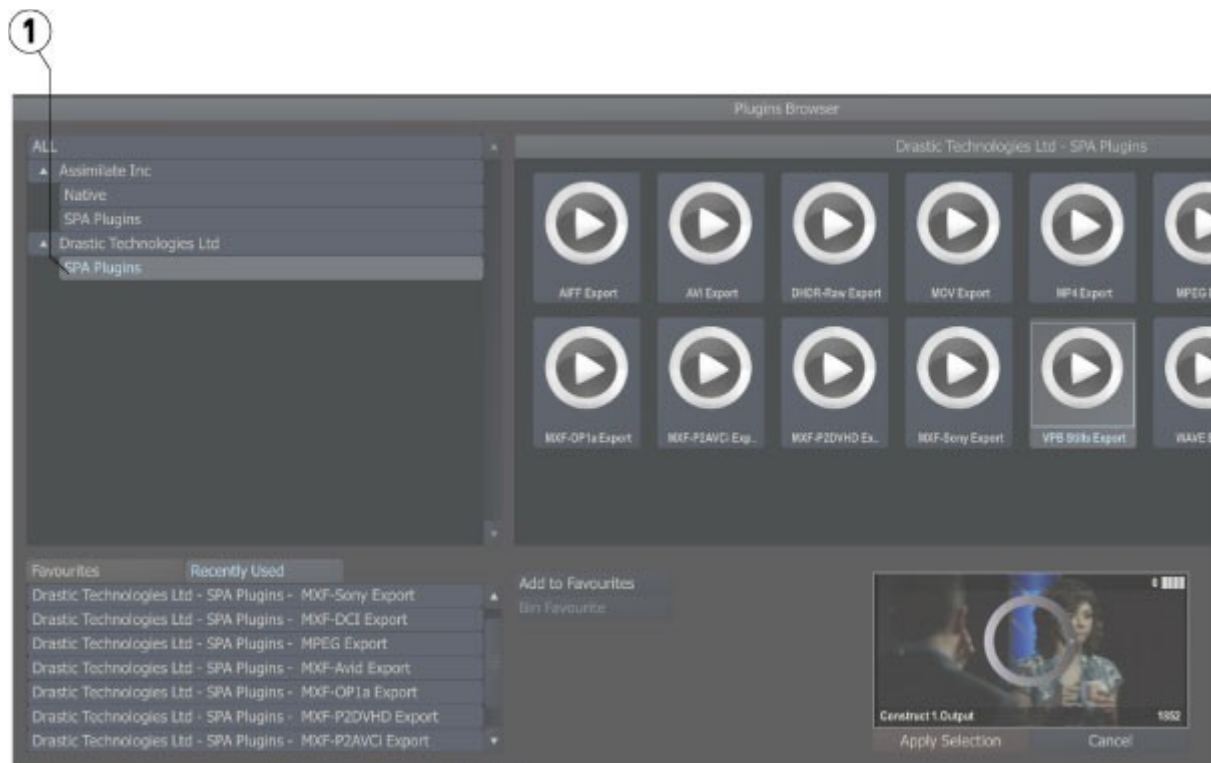
For types that are supported in Scratch and MediaReactor Workstation (e.g. ARRI, MXF), select the **Drastic Many** file filter (2) to force the MediaReactor Workstation plugin to be used.

To export a file from Assimilate SCRATCH/Lab, from the **Output** area, press the **Add Single Output** button (1) to add a single node.



Press the **Play** button (1) – it's the circle with an arrow in it - to go to the output page.

Click the **Insert...** button (1) to open the Export Plugins window.

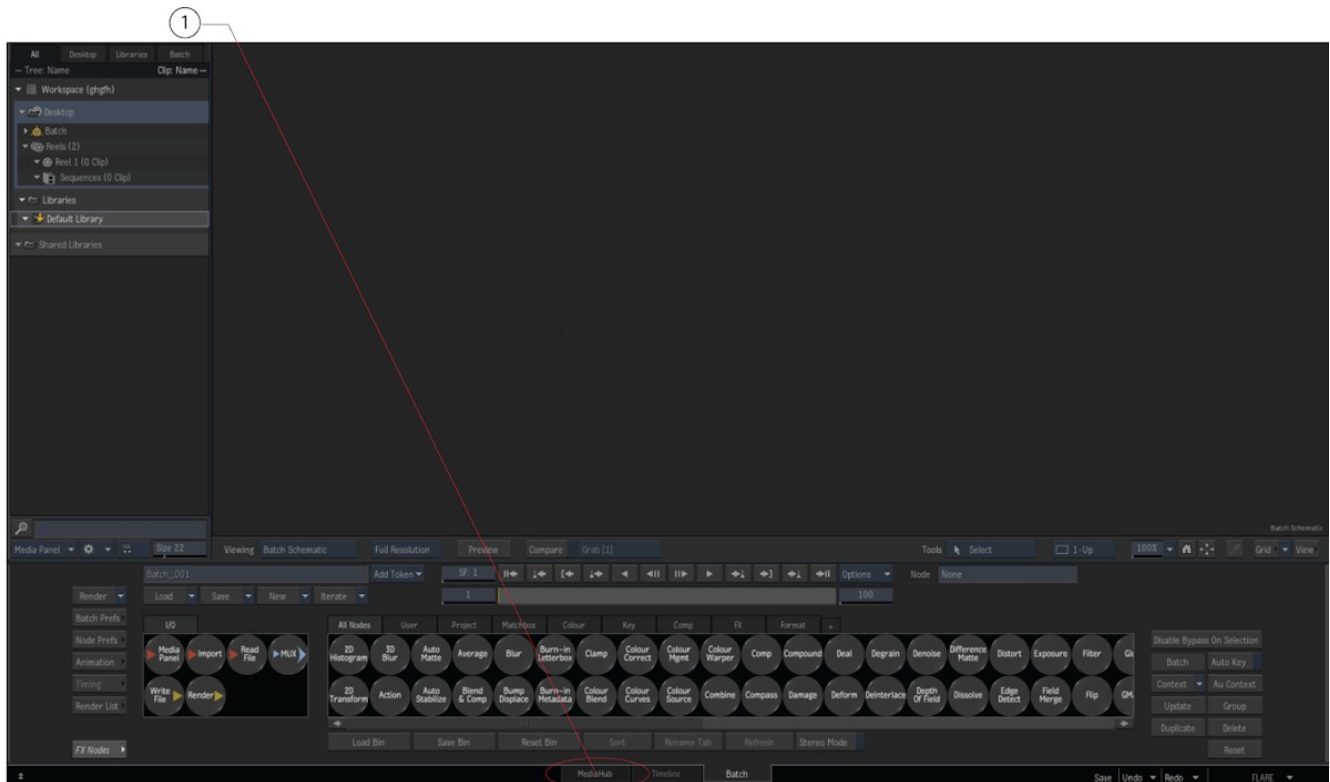


The screenshot shows the After Effects interface with the 'Render Queue' tab selected. The 'Render Queue' list contains one item: 'Construct 1 - MXF-P2AVC Export'. The progress bar for this item is at 1.08. The 'Render' button is highlighted in the bottom right corner.

## 4.8 ...with Autodesk Flame

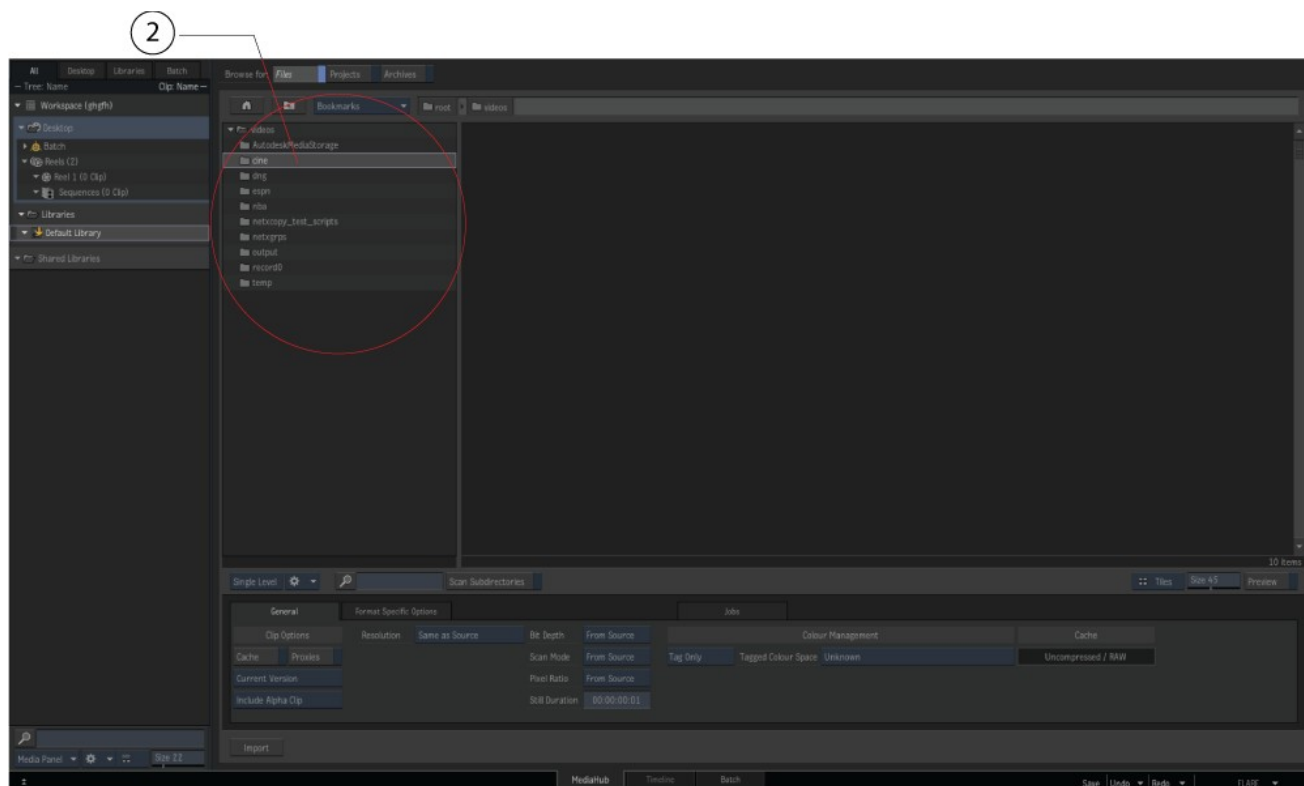
Autodesk Flame users will already be familiar with how to open and work with a file in Flame. With MediaReactor properly installed and licensed, support for several new formats will be added. It is possible to confirm that the MediaReactor plugin is being used to open these files.

Open Flame, and press the MediaHub tab (1) at the bottom to view accessible media.

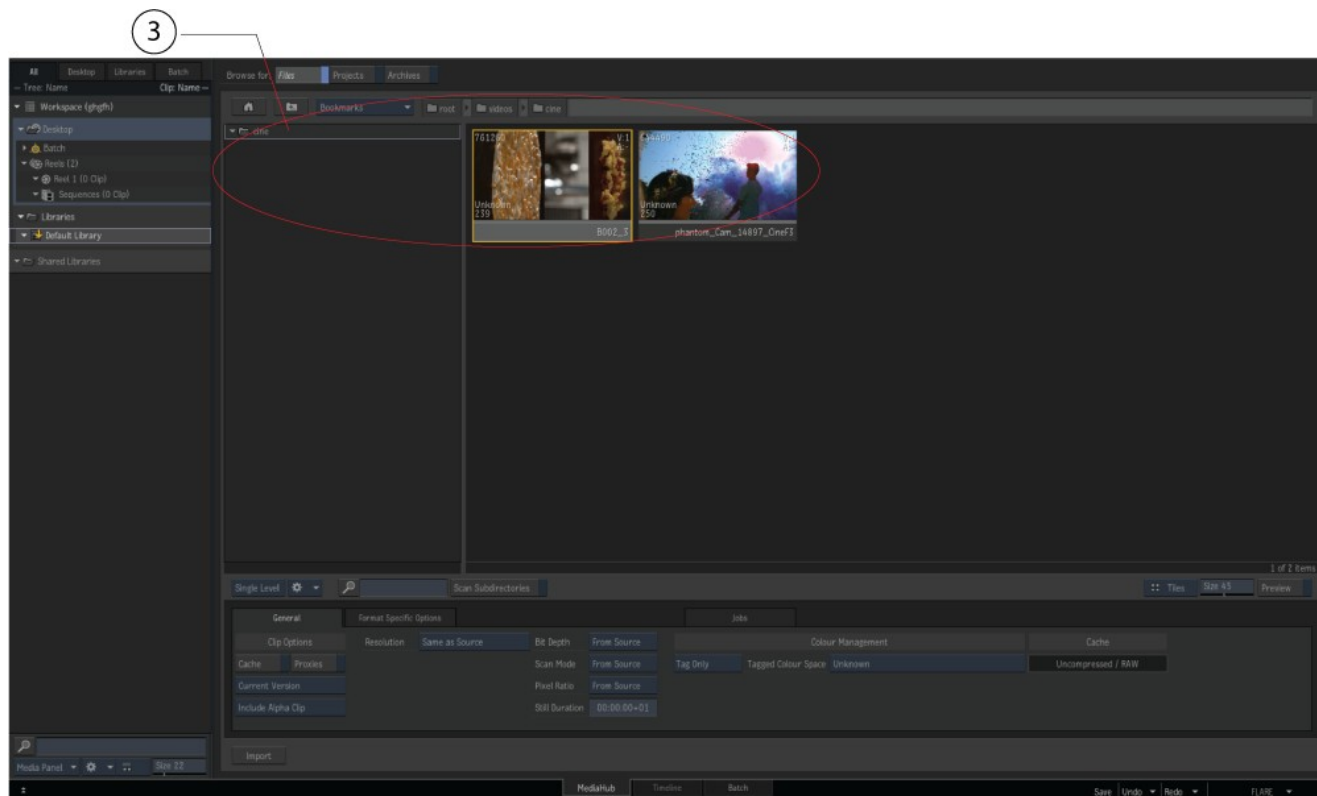




Clicking on the Media Hub displays the contents of the media folder (2).

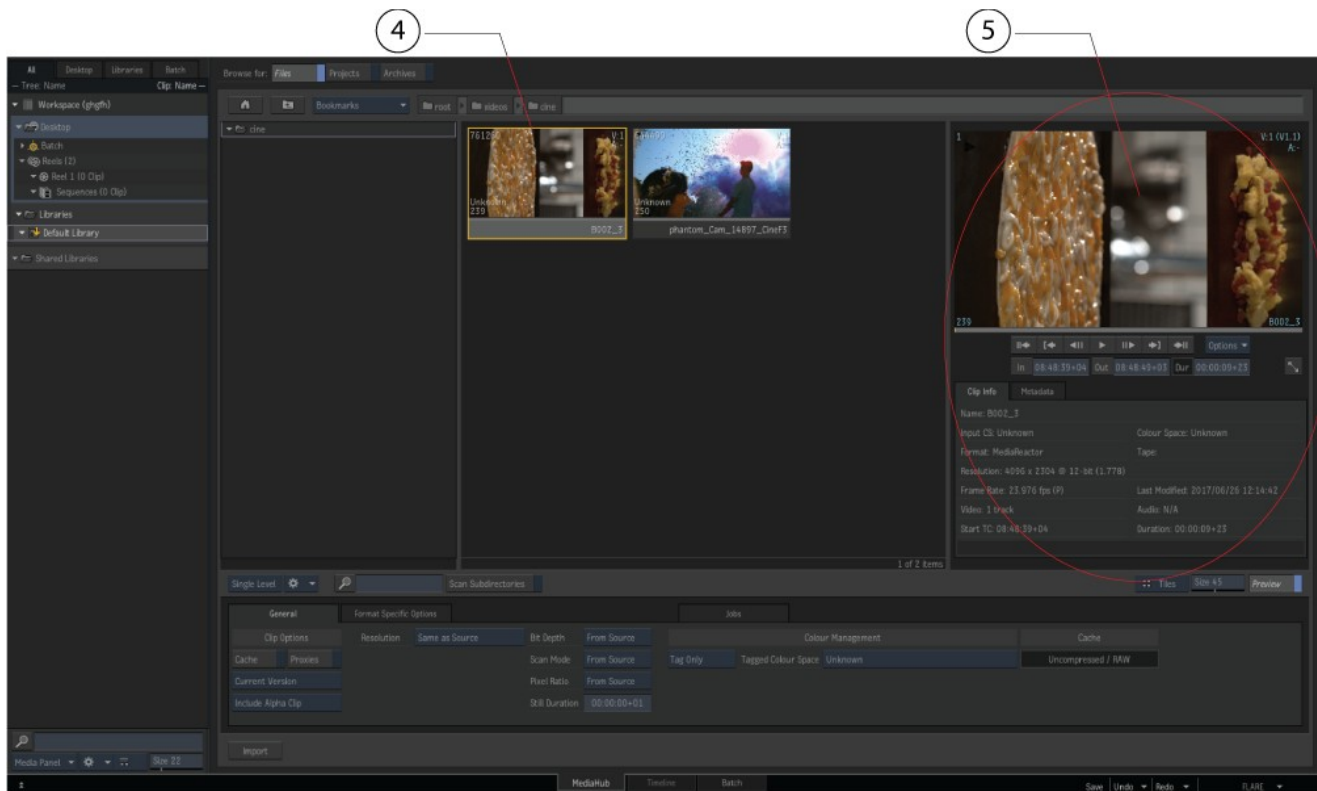


Double clicking on a folder will display the contents of the folder. In this case the Cine folder (3) has been selected, and the clips in it are displayed.



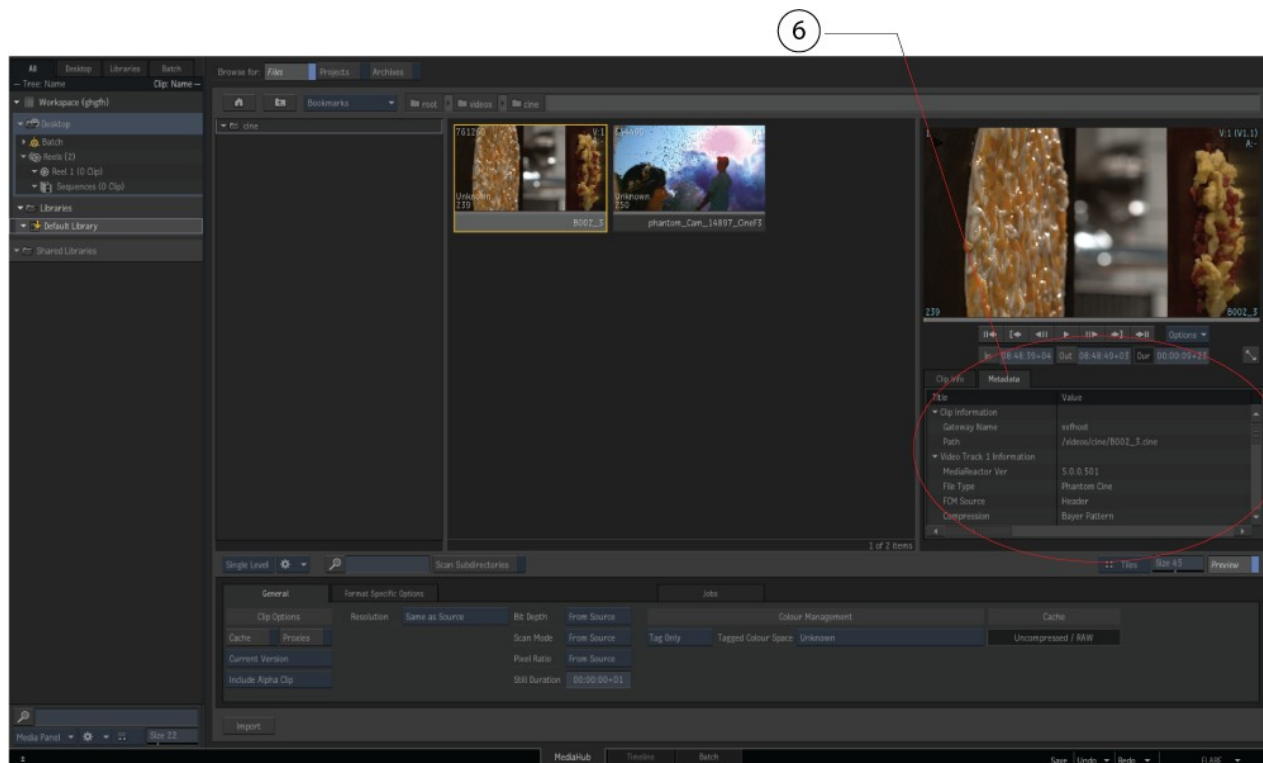
Once the clips are shown as above, a further check can be performed.

Clicking on the clip picon (4) loads the clip and its metadata into the panel on the right (5).

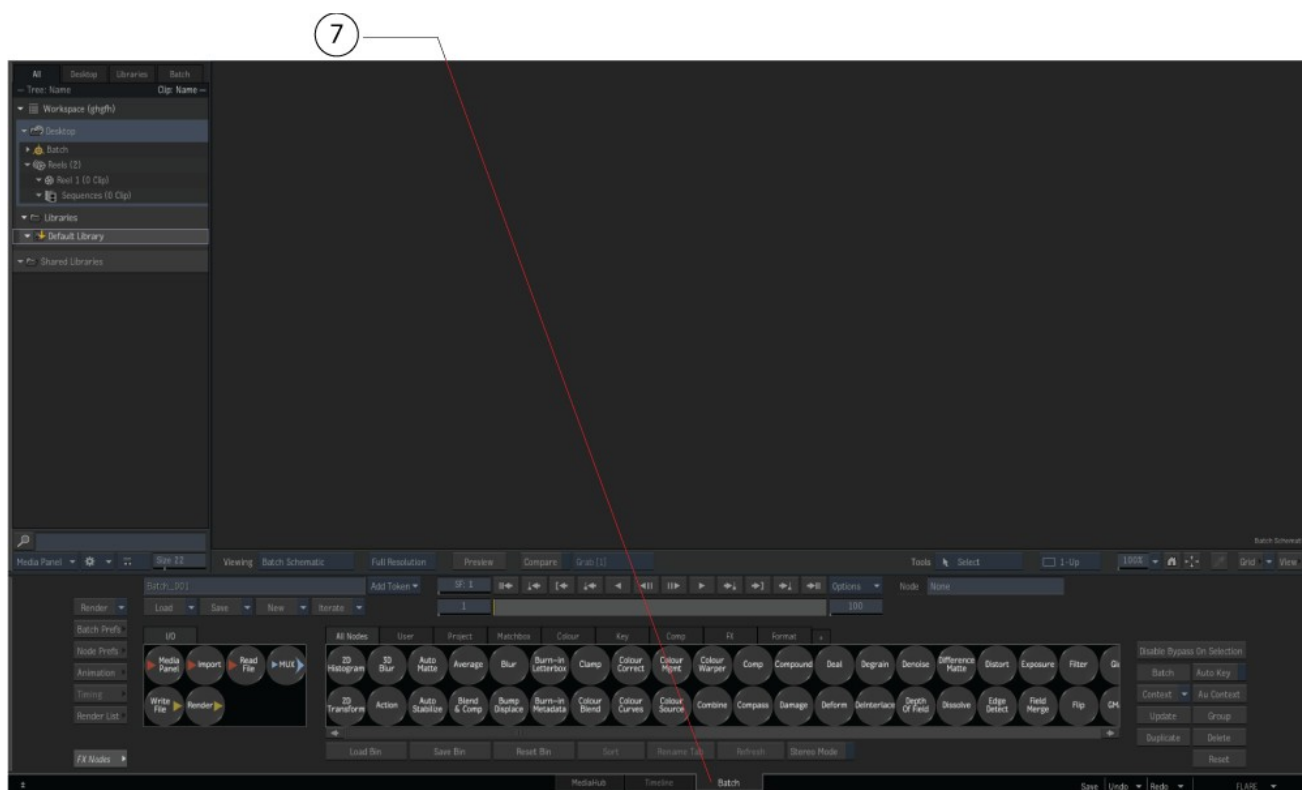


If you open a clip that requires the MediaReactor plugin, and the plugin has been properly installed and licensed, you will see in the Clip Info tab, that the Format specifies the MediaReactor plugin is being used.

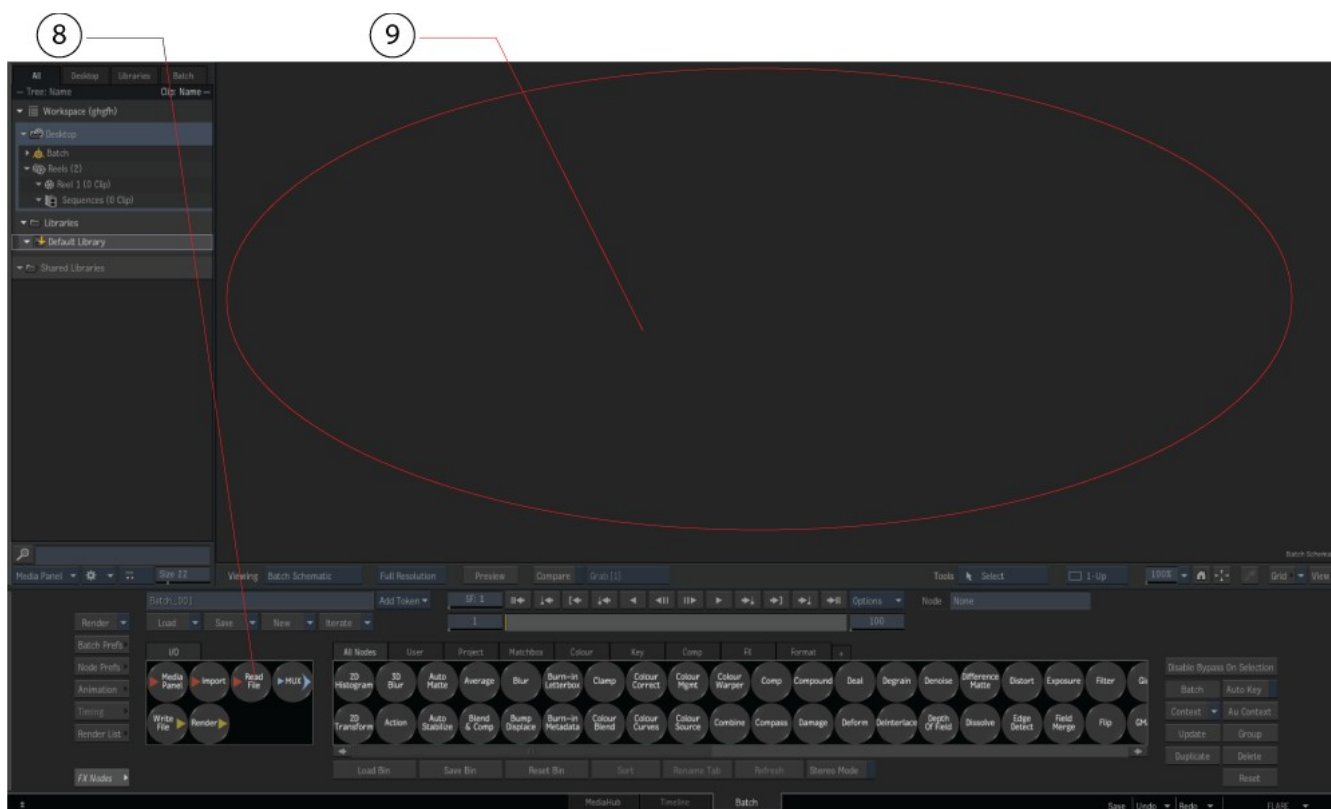
Clicking on the Metadata tab (6) should also display the MediaReactor version in the Video Track Information, if the clip was loaded using the MediaReactor plugin.



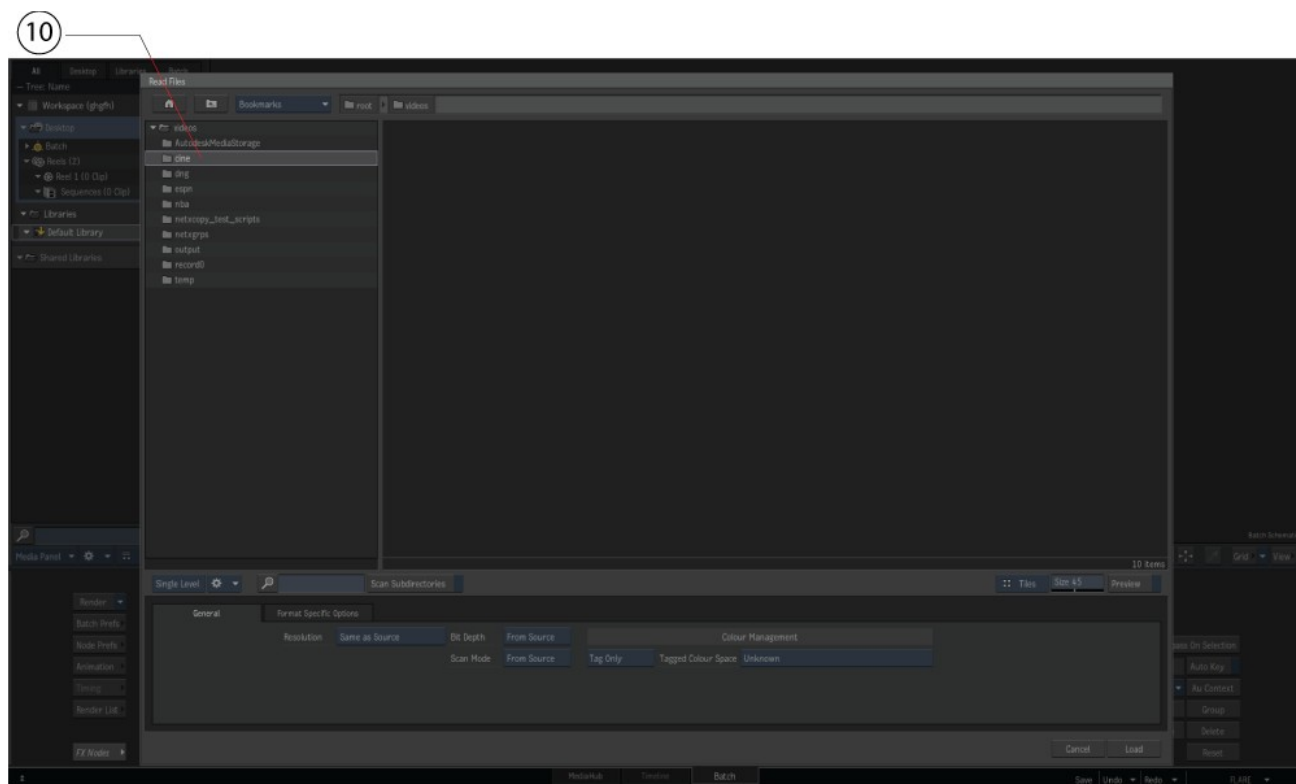
This information also shows up with the clip Batch function. Click on the Batch tab (7).



Grab the Read File button (8), and 'drag' it onto the media area (9), then release the mouse ('drop' it).

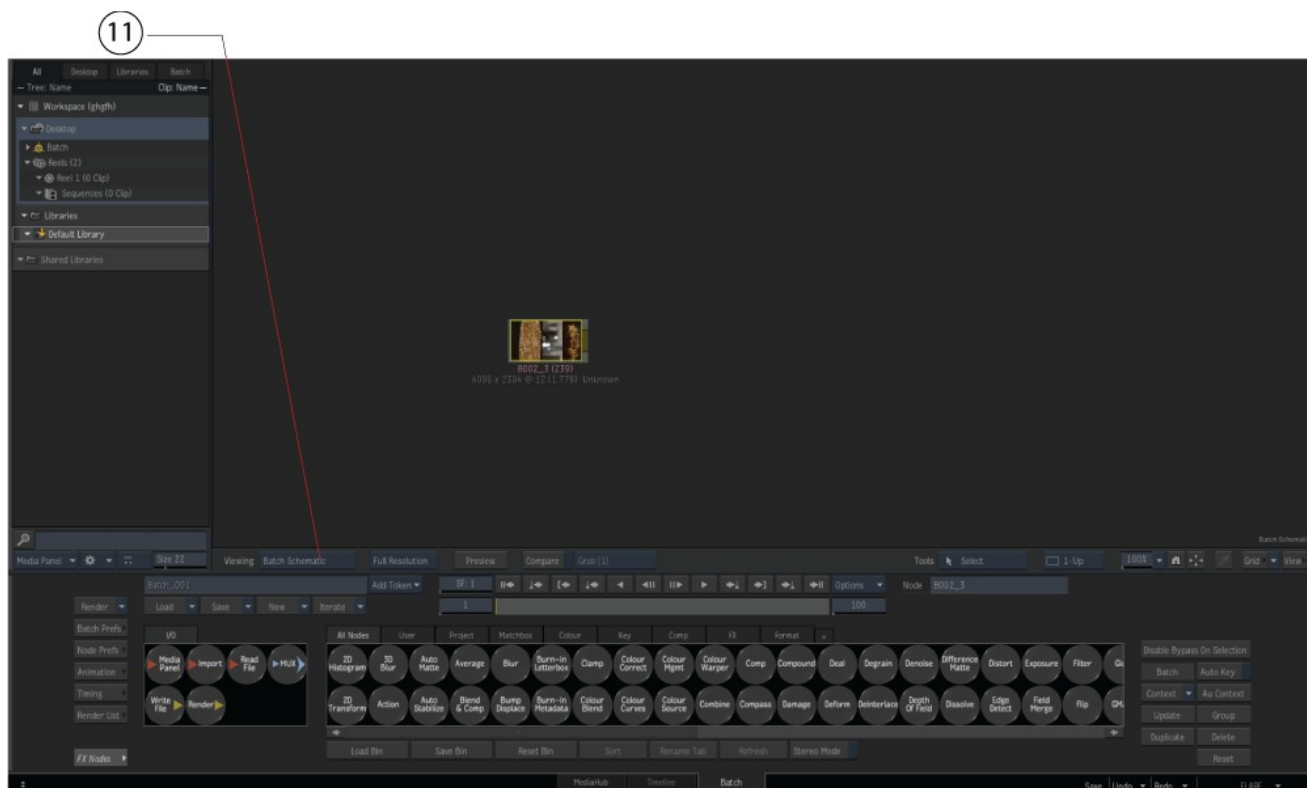


This opens the Read Files window.



Navigate to the folder (10) and load the media as in the last example.

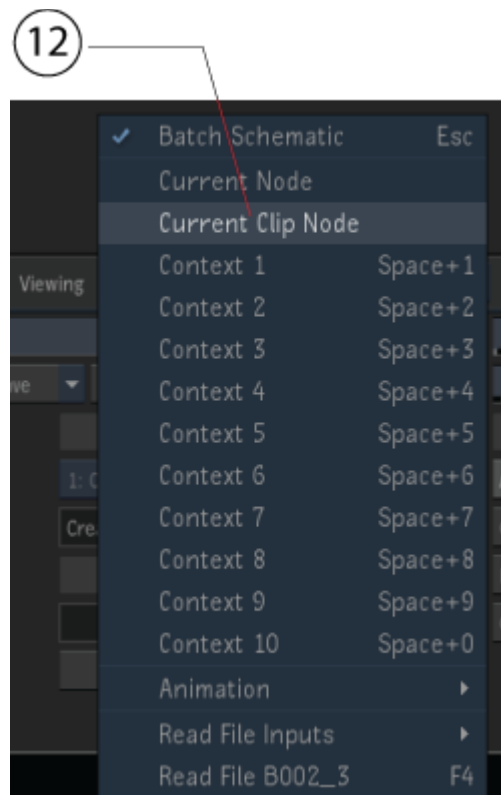
Click on the Viewing mode button (11).



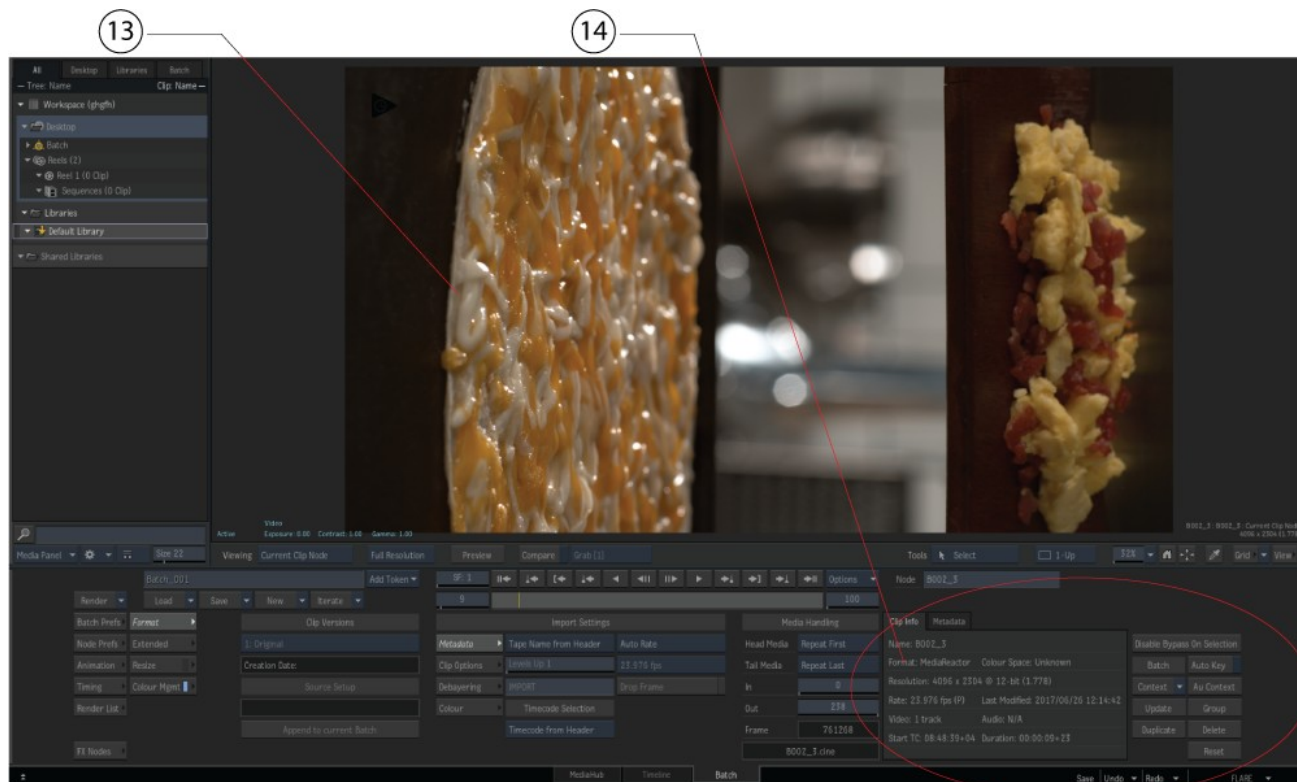
This displays the available viewing modes.



Select **Current Clip Node** (12).

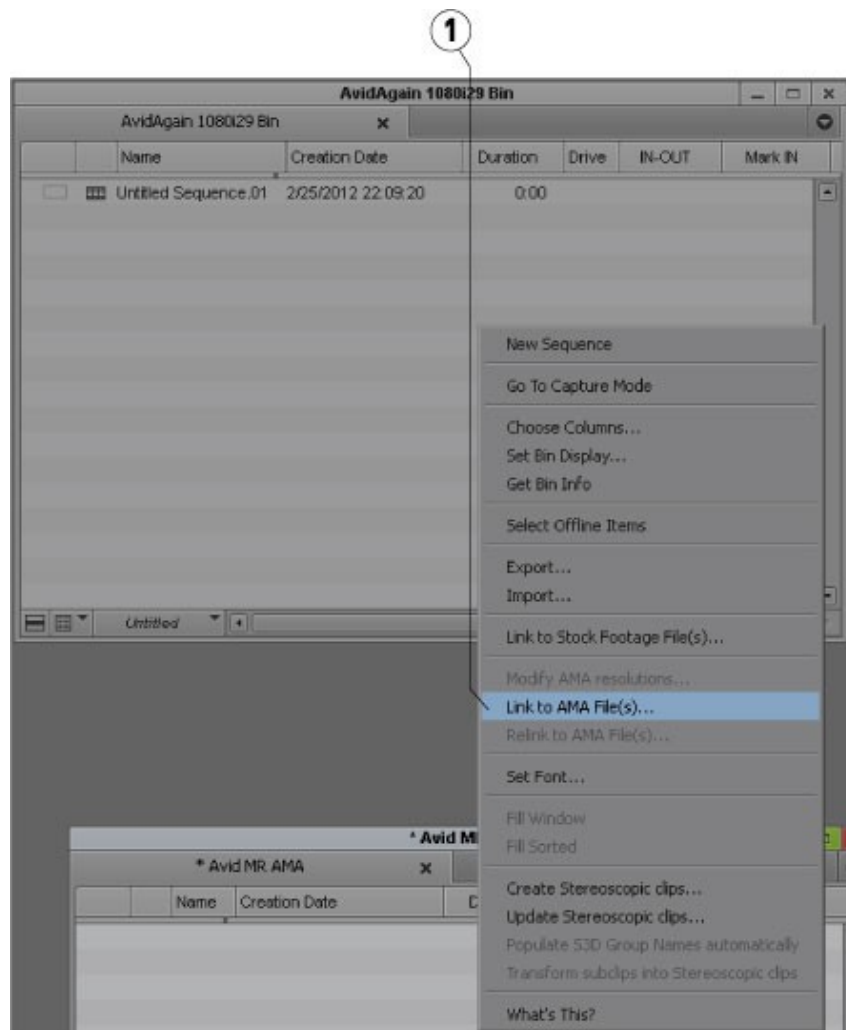


In this mode, the clip is loaded (13) and its clip info and metadata are displayed. Particularly, in the Format section of the Clip Info, MediaReactor (14) is specified.

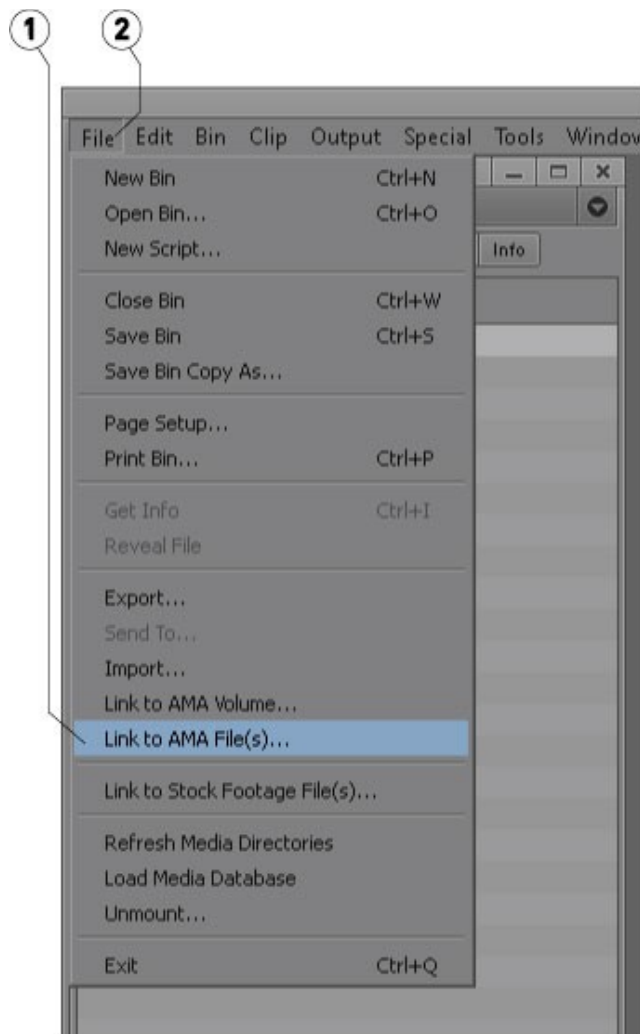


## 4.9 ...with Avid Media Composer 6 (Symphony, NewsCutter)

To bring a file into the editor:



Right click on the bin and select the **Link to AMA File(s)...** menu (1) and select the file.

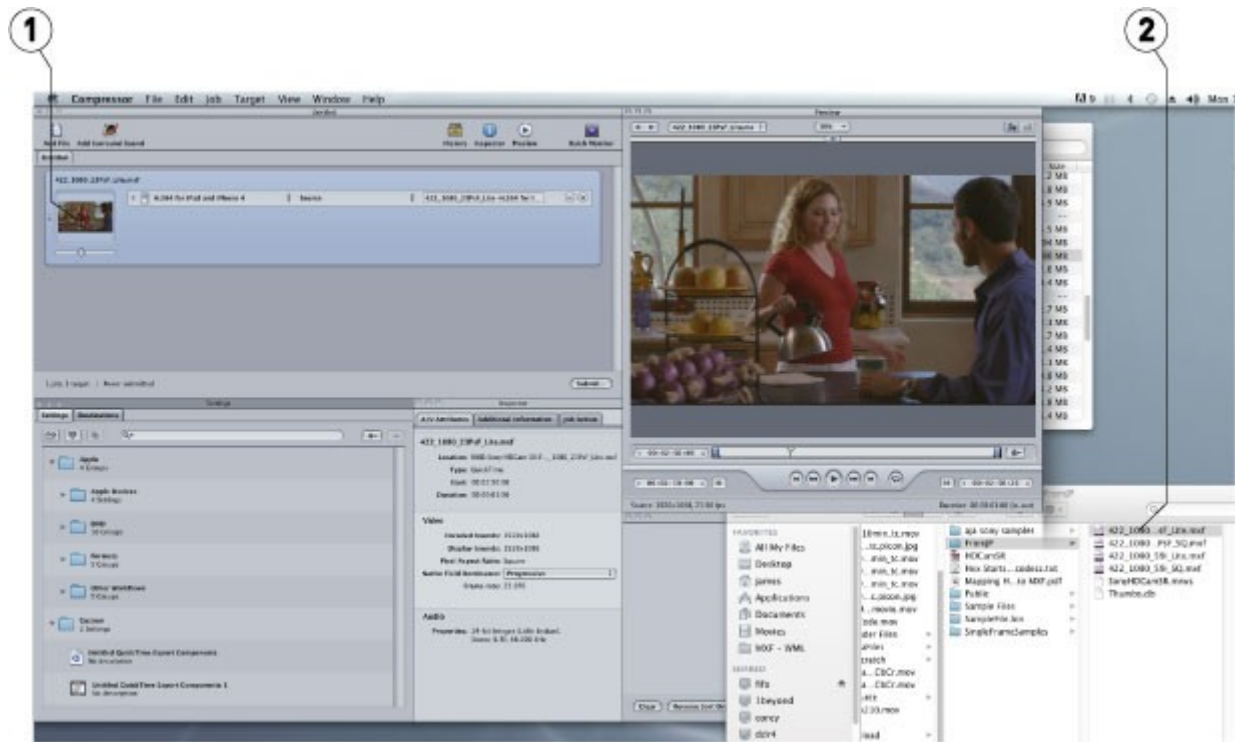


The **Link to AMA File(s)** menu (1) is also available under the **File** menu (2).

If your source files are on a network drive, you need enable access to the network drives in Media Composer. Open a **Console** window (menu **Tools | Console**) and type 'alldrives' without the quotes and hit **Return**. This only needs to be done once.

## 4.10 ...with Apple Compressor

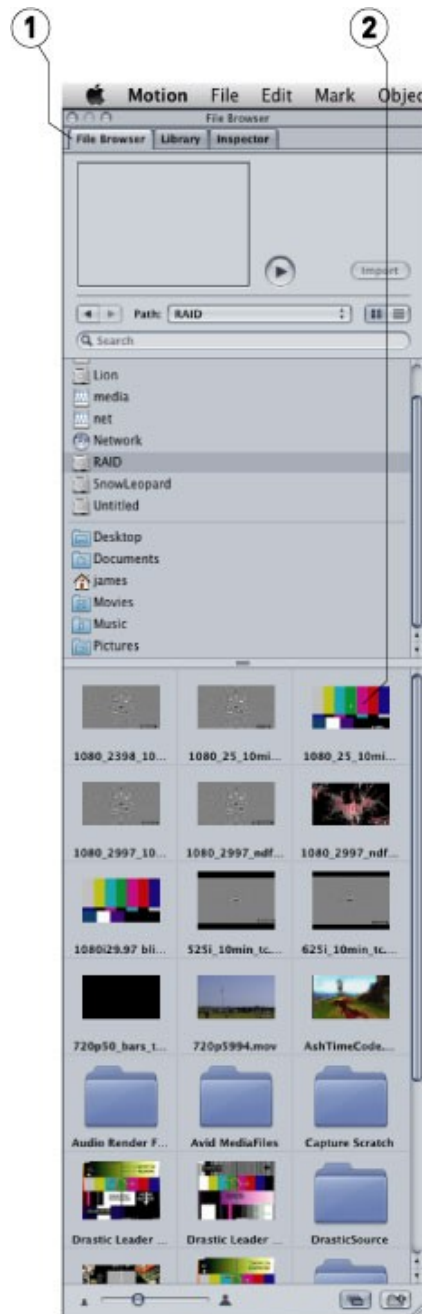
To convert from a MediaReactor Workstation file: Create an output profile.



Drag the source file (2) on top of the output profile and drop it (1).

## 4.11...with Apple Motion

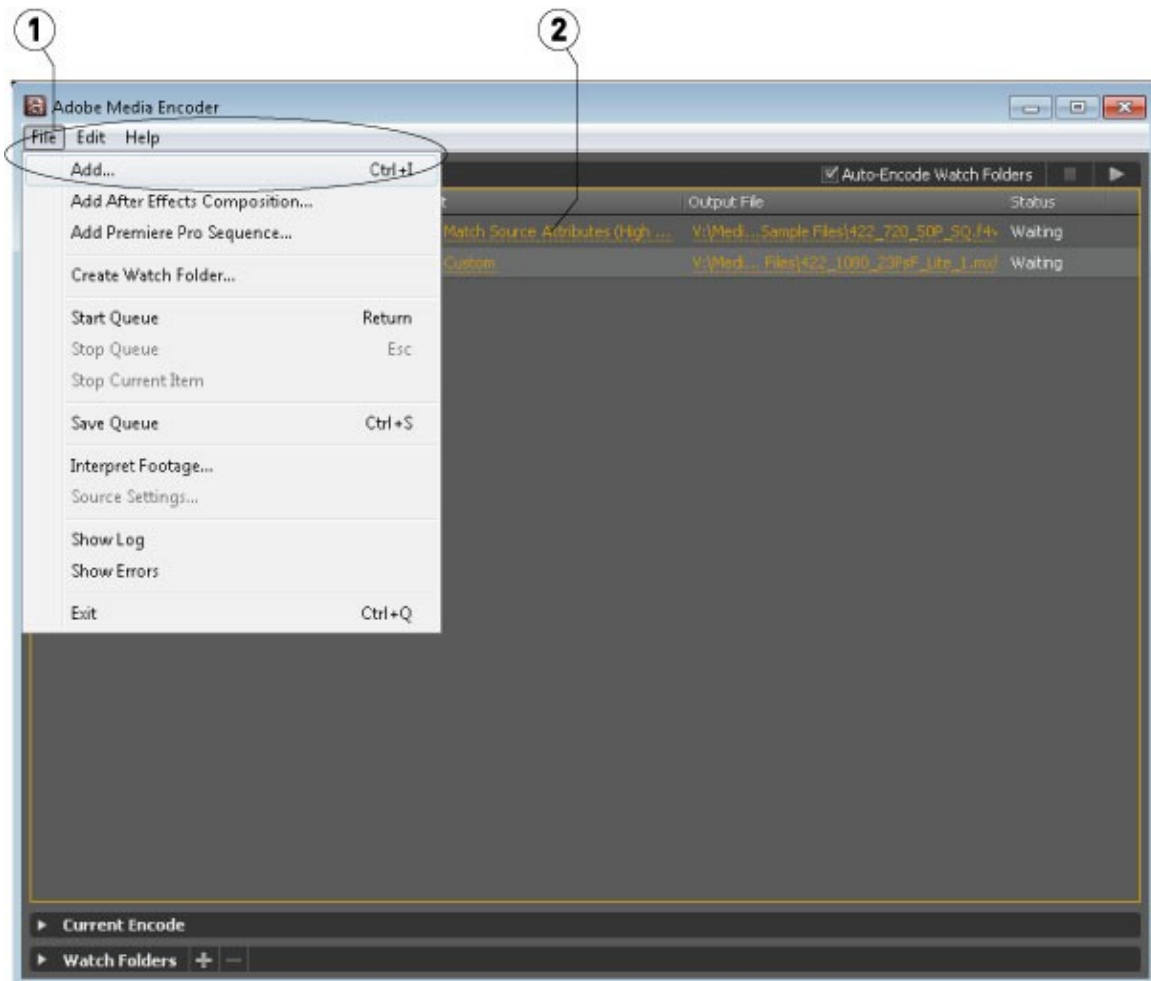
To use a MediaReactor Workstation file in Motion, use the built in **File Browser** (1) to find and select the file.



Supported files will appear as a picture of one of the frames (2) in the browser.

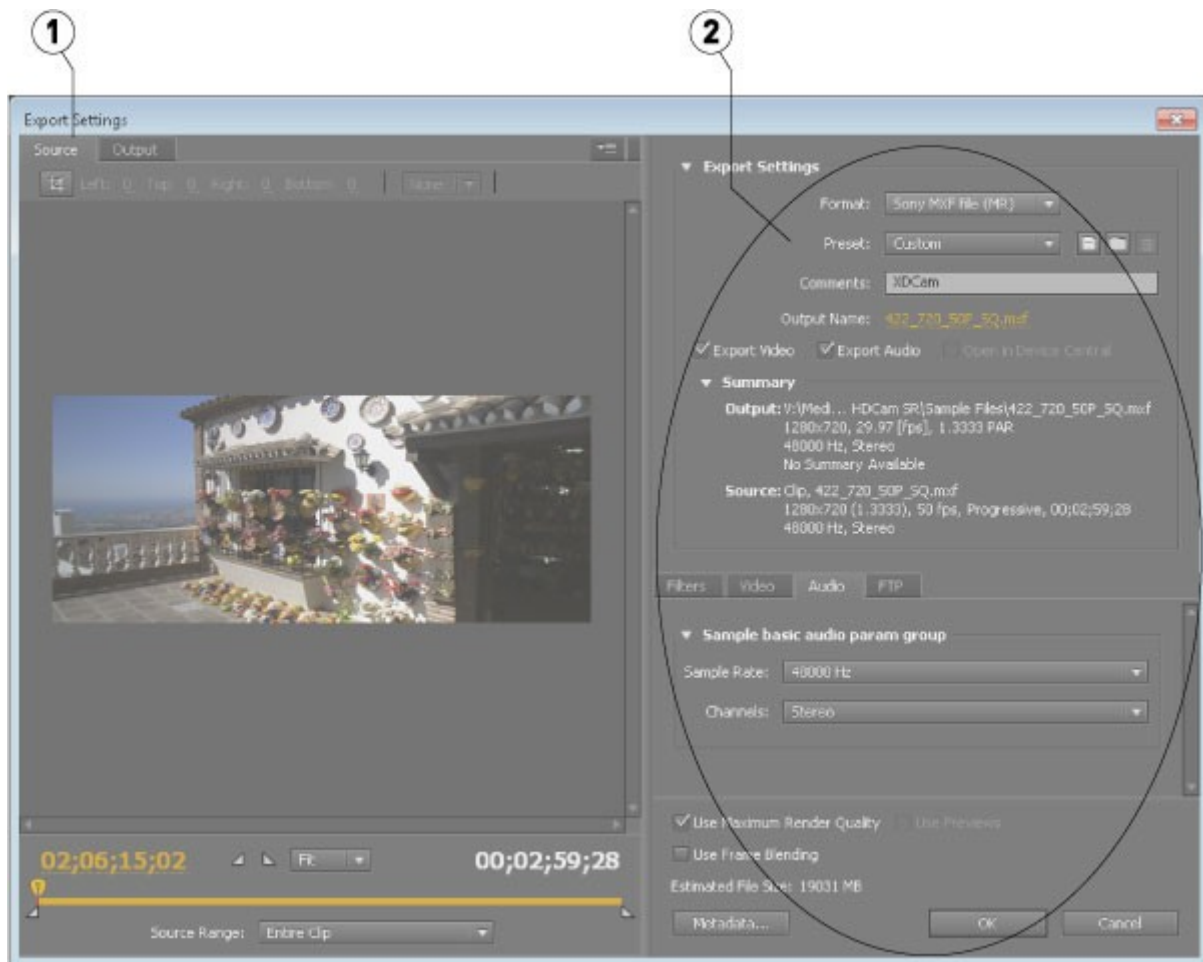
## 4.12 ...with Adobe Media Encoder

To add a MediaReactor Workstation file:



Use the menu **File | Add** (1), or drag and drop the file on the application. Click on the **Format** (2) or **Preset** column link. This opens the **Export** window.

The **Export** window opens with the selected file loaded (1). The **Export** window provides various controls (2) to allow the user to set the type of file that will be created during the export process.



Once all the parameters have been sent the user can press the **OK** button to close the **Export Settings** window. The file will have been updated in the queue, with the parameters that will be used to create the new file displayed.

## 4.13 ...with QuickTime Player

To open a file in QuickTime Player (free or full version), select the **File | Open File** menu. In Windows it is necessary to set the file filter to all (\*.\*) to see non mov/avi files.

To export a file from QuickTime Player (requires full version), select the menu **File | Export...** In the export dialog, select the output type and options. Type in the file name and file extension.

When outputting a file in QuickTime, a 0k file is created in the directory which we do not use.



## 4.14 ...with Windows Media Player

To open a file in Windows Media Player, select the **File | Open** menu, or drag and drop the file onto the Player

## 4.15 Live Event Editing in FCP7, Premiere and Media Composer

MediaReactor Workstation also provides advanced edit-while-recording of live events directly in your favorite editing software, when coupled with a live event compatible recorder.

To take advantage of this huge time saver, set up your compatible recording device (Drastic DDR, Net-X-Code Server, or 3rd party systems like XOS Hurricane Replay), begin recording and load the various camera files directly into Media Composer, Premiere or Final Cut Pro 7. All material recorded at that point is immediately available for editing, and as new material is recorded it automatically becomes available on the editor. Simply edit as normal, building packages, melds, internet content or new packages during the show, rather than having to wait and work long after everyone else has gone home.

## 4.16 Indecam MOV File Reader Configuration

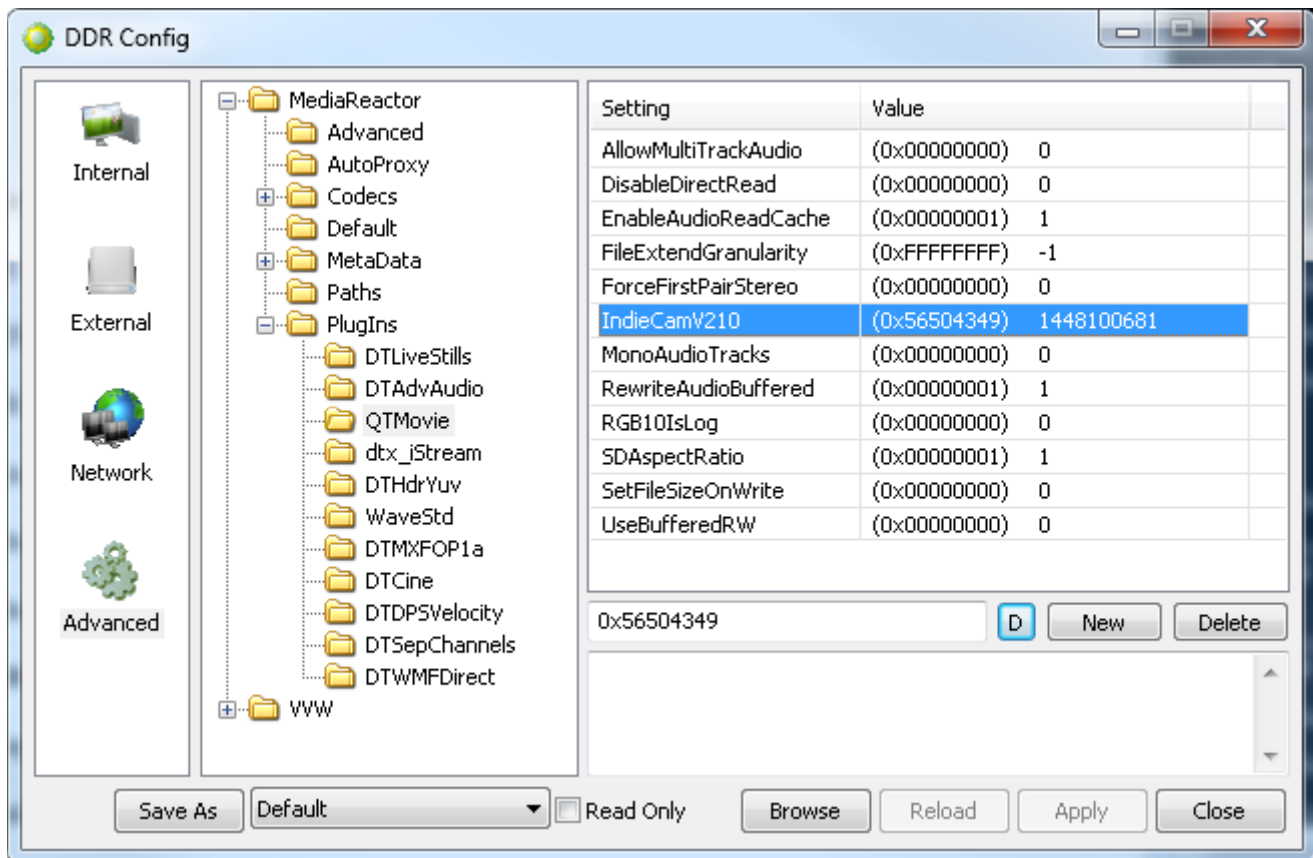
The Indecam cameras are small, light, HD and 2K recording RAW bayer pattern cameras. They provide the raw data via HD-SDI by embedding it into a SMPTE standard signal that can be recorded by most uncompressed recorders.

The RAW data cannot be automatically detected because the type marked by the recorder is SMPTE YCbCr 10 (v210 in general). To use these files in Assimilate SCRATCH and MediaReactor, the system must be set up to re-label these files.

### 4.16.1 Overriding IndieCam MOV Files' FourCC

The default fourcc (a four character code that describes the video format) in an MOV file will be 'v210'. This is the fourcc that describes the YCbCr 10 bit video that was captured from the HD-SDI output of the camera by the capture device. To have Assimilate SCRATCH or Lab properly interpret the raw data, it is necessary to override the fourcc with an Indecam-specific fourcc.

To set this up, run DDRConfig from the MRWS (MediaReactor Workstation) installation:



Under the MediaReactor/PlugIns/QTMovie branch there will be an IndieCamV210 entry. If this is changed to one of the supported Indiecamm types, then all v210 files will be interpreted as that type of IndieCam file. The possible types are

- INDIECAM\_POV ICPV - Indiecamm POV GBRG
  - 0x56504349
- INDIECAM\_RGGB2K IC12 - Indiecamm RGGB 12bit-RAW
  - 0x32314349
- INDIECAM\_2KRAW IC2K - Indiecamm GBRG 2k-RAW
  - 0x4B324349
- INDIECAM\_2IN1RAW IC2X - Indiecamm GBRG 2in1-RAW
  - 0x58324349

Setting the IndieCamV210 entry to the hex values above (when the edit box is in hex) will cause all v210 files to be interpreted as that type of Indiecamm raw file. This means, (1) you cannot use standard v210 files and, (2) you cannot mix 2K and POV files on the same timeline, as one of them will be interpreted incorrectly.

## 4.17 Multichannel Audio File Naming

Drastic products can support up to 16 mono (or 8 stereo pairs) of audio. There are file formats that are supported (like wave file extensible) that can contain all 16 channels in a single file, but these are not necessarily the most useful file types for production. In general, Drastic products prefer to store audio in a series of uncompressed, stereo files on disk in WAVE or AIFF format.

Here are the primary types for these uncompressed stereo files:

- AIFF 16 Bit Big Endian Stereo
- AIFF 20 Bit Big Endian Stereo
- AIFF 24 Bit Big Endian Stereo
- AIFF 32 Bit Big Endian Stereo
- WAVE 16 Bit Stereo
- WAVE 20 Bit Stereo
- WAVE 24 Bit Stereo
- WAVE 32 Bit Stereo
- WAVE 16 Bin Mono (for WMV/Matrox compatibility)

Regardless of the file type, the audio files will always have the same naming conventions. For the examples below, the '.video' is the video source file. The '.wav' could equally be '.aiff' files.

- BaseName.video (BaseName.avi, BaseName000001.dpx, etc)
- BaseName.wav (or BaseName.wav or BaseName.A12.wav)
- BaseName.A34.wav
- BaseName.A56.wav
- BaseName.A78.wav
- BaseName.A9A.wav (channels 9 and 10)
- BaseName.ABC.wav (channels 11 and 12)
- BaseName.ADE.wav (channels 13 and 14)
- BaseName.AFG.wav (channels 15 and 16)

- If the video file is a series of stills, then the base name is everything before the numeric count. For example:

- BaseName\_000001.tga
- BaseName\_.wav
- BaseName\_.A34.wav

- The correct naming for a group of mono files is:

- BaseName.video

BaseName.a1.wav  
BaseName.a2.wav  
BaseName.a3.wav  
BaseName.a4.wav  
BaseName.a5.wav  
BaseName.a6.wav  
BaseName.a7.wav  
BaseName.a8.wav  
BaseName.a9.wav  
BaseName.aa.wav (channel 10)  
BaseName.ab.wav (channel 11)  
BaseName.ac.wav (channel 12)  
BaseName.ad.wav (channel 13)  
BaseName.ae.wav (channel 14)  
BaseName.af.wav (channel 15)  
BaseName.ag.wav (channel 16)

Stereo pairs may be missing, but mono files may not. Any missing stereo channels will be filled with silence

There are a couple of other supported naming conventions which are there purely to support third party software packages. These include:

BaseName.video  
BaseName.aa.wav (one stereo pair only)

BaseName.video  
BaseName\_1.wav (dual mono files)  
BaseName\_2.wav (one stereo pair total)

BaseName.video  
BaseName.1.wav (dual mono files)  
BaseName.2.wav (one stereo pair total)

BaseName.video  
BaseName\_R.wav (dual mono files)  
BaseName\_L.wav (one stereo pair total)

BaseName.video  
BaseName.r.wav (dual mono files)  
BaseName.l.wav (one stereo pair total)

BaseName.video

BaseName.wav (these are all mono wave files)

BaseName\_A2.wav

BaseName\_A3.wav

BaseName\_A4.wav

BaseName\_A5.wav

BaseName\_A6.wav

BaseName\_A7.wav

BaseName\_A8.wav

BaseName.video

audio12.wav

audio34.wav

audio56.wav

audio78.wav

BaseName.video

default.wav

## 4.18 Closed Caption Format Support

Drastic products generally support closed captions. Video I/O products can capture and play back closed caption information, depending on the capability of the software and the version. MediaReactor can convert closed caption formats along with the video and audio files.

Here is the list of closed caption formats supported by Drastic products:

- MPEG-2 'user' CC (read)
- MXF SMPTE 436 (read/write)
- MXF Avid embedded CC (read)
- MCC files side bar MacCaption/PC-Caption (read/write)
- SCC files side bar MacCaption/PC-Caption (read/write)
- MOV SD/HD CC tracks (read, and write with a special setup)

MediaReactor fully supports reading and writing the closed caption formats above. SCC and MCC are always written, along with other formats when available.

## 4.19 macOS Enabling legacy codecs for more output choices in QuickTime 7.4 and greater

### Symptoms

With QuickTime 7.4 or later installed, some older encoders (codecs) may appear to be missing export options in applications that export QuickTime files, such as Final Cut Pro or Compressor or from the export options in QuickTime Player Pro.

### Resolution

Take the following steps to enable additional encoders:

Choose Apple menu > System Preferences.

Choose View > QuickTime.

Click the Advanced button.

Select the checkbox next to Show legacy encoders.

## 4.20 macOS Using MediaReactor Workstation as a source reader for your own (or other) programs

MediaReactor Workstation provides a number of different ways to read supported file and compression types into your own programs. Here is a list of publicly available interfaces:

- **QuickTime Interface** - MRWS provides a series of components to QuickTime including file readers, compressors, decompressors and low level data handlers that allow any program to read all the available formats through QuickTime as though they were normal MOV files
- **DTMediaRead Interface** - This interface is a direct reader that requires an OEM agreement with Drastic.
- **MkRefMov** - MRWS includes a command line program called MkRefMov (Make Reference Movie). This program can make a reference movie (a small pointer only movie) for most supported files that can be read by any program supporting QuickTime MOV files. This includes new programs like Final Cut Pro X that don't normally support formats like MXF variants from Omneon, Pinnacle, Grass Valley and Avid.

## 4.21 Windows Using MediaReactor Workstation as a source reader for your own (or other) programs

MediaReactor Workstation provides a number of different ways to read supported file and compression types into your own programs. Here are a list of publicly available interfaces:

- **DirectShow** - MRWS installs a DirectShow Filter called 'Drastic MediaReactor File Source'. This can be opened with any supported file to provide audio and video to a DirectShow filter graph
- **QuickTime Interface** - MRWS provides a series of components to QuickTime including file readers, compressors, decompressors and low level data handlers that allow any program to read all the available formats through QuickTime as though they were normal MOV files
- **DTMediaRead Interface** - This interface is a direct reader that requires an OEM agreement with Drastic. See the [DTMediaRead SDK page](#) for more information.
- **MkRefMov** - MRWS includes a command line program called MkRefMov (Make Reference Movie). This program can make a reference movie (a small pointer only movie) for most supported files that can be read by any program supporting QuickTime MOV files. This includes new programs like Final Cut Pro X that don't normally support formats like MXF variants from Omneon, Pinnacle, Grass Valley and Avid.

## 4.22 OS Independent MkRefMov - Make Reference Movie

Usage: ./mkrefmov -i <sourcefile> [-o <targetfile>]

- -i <sourcefile> File to be referenced.
- -o [targetfile] Optional, reference file name, otherwise it will use the source name with an mov extension

NOTE: Due to limitations in QuickTime, MkRefMov will not work properly with a series of still images. If you supply one, a full MOV will be created instead.

## 4.23 AddTcMov - Add Time Code To An Existing QuickTime MOV

Usage: addtcmov -i <moviefile> -s <tcframe> -t <tctype> -r [reelname]

- -i <moviefile> QuickTime MOV to add tc track to
- -s <tcframe> Integer time code frame number of first frame in movie file.
- -t <tctype> Time code type
  - 24 = 1
  - NonDropFrame = 2
  - DropFrame = 4
  - Pal = 8
  - 50 = 16
  - 59.94 = 32
  - 59 special = 34 (not recommended)
  - 60 = 64
  - 23.98 = 128
  - 23.98 true = 132 (not recommended)
  - hundredths = 68
- -r <reelname> Reel name for file

## 4.24 mkRtIndex - Make An rtin (Real Time Index) File

Usage: mkRtIndex <sourcefile> [-v]

NOTE: parameters must be in order

- <sourcefile> File to be indexed.



- -v Optional, verify rtIndex instead of create.

## 4.25 MRMetaData - Extract a File's Metadata Information

Usage: mrmetadata.exe -i <sourcefile> -qx -j # -k <picon.jpg> -e # -c -n 1 -w <output.wav> -m <reference.mov>

- -i <sourcefile> File to be referenced.
- Optional parameters:
  - -q Quiet mode.
  - -x Do NOT export metadata XMLS
  - -j # Create a JPEG picon from frame #
  - -k <picon.jpg> File name for JPEG picon frame
  - -e # Extract a JPEG picon for every # frame
  - -c Extract closed captioning
  - -n # First channel of source audio for the wave file (0,2,4)
  - -w <output.wav> Extract audio to a wave file
  - -m <reference.mov> Create a QuickTime reference file

## 4.26 MRAnalyze - Use Standard PSNR/(MS)SSIM to Compare an Original and Converted File

mranalyze - Video/Audio analysis tool ([www.drastic.tv](http://www.drastic.tv))

Usage: mranalyze -a <source a> -b <source b> -q -p # -s # -m # -g # -f # -l # -x # -n # [-o <targetfile>]

- -a <source a> Original file.
- -b <source b> Compressed file.
- -q Quiet (no output) must be first argument.
- -p # PSNR type
- -s # SSIM type (0-Square, 1=Guassian)
- -m # MS-SSIM type
- -g # Global checks (0-none, 1-basic, 2-advanced)
- -f # First frame to check
- -l # Last frame to check
- -x # B source first frame to check
- -n # Next frame distance (def 1 = every frame)
- -o [targetfile] Optional, csv output name (or '-o i' to generate the file name)

## 4.27 Accessing S3/HTTP/HTTPS Assets with .STREAM Files

Normally, Adobe Premiere, After Effects, Media Encoder, etc. require a physical file to be located on a standard file system, shared or local. MediaReactor Lite (and MediaReactor Workstation) allow all these software products to edit files directly from S3/HTTP/HTTPS file stores. The magic is performed by tiny local text files with the extension .stream. These are encrypted or unencrypted descriptions of the file's actual location, saved on a local or accessible network storage for Adobe to use.

### 4.27.1 Direct Access to Cloud Assets

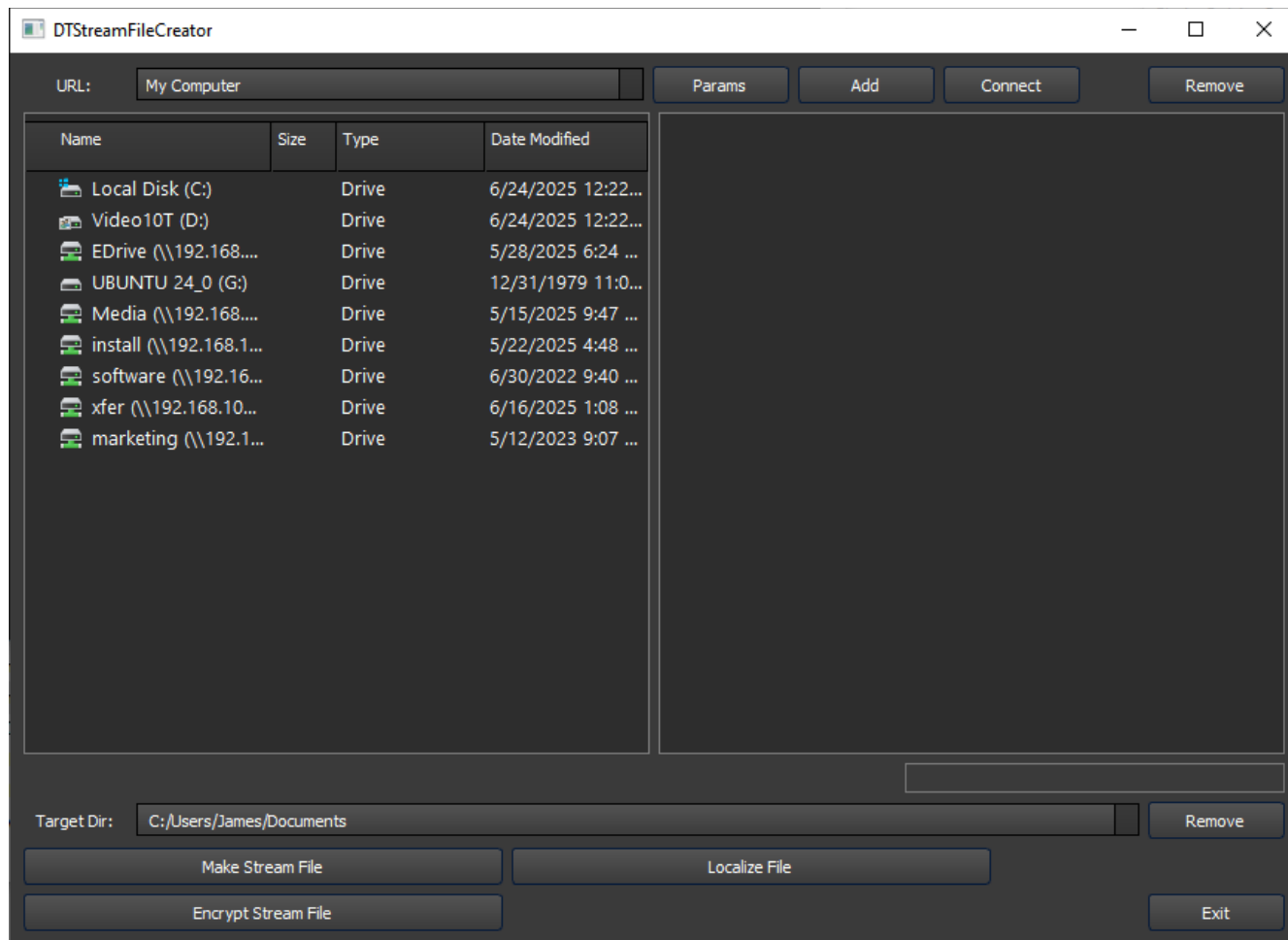
Adobe Premiere uses files, and cannot see ephemeral assets, such as streams on an S3 or HTTPS provider. Typically video files are into the hundred of MBs, sometimes GBs, so there is both a delay, and an added cost, to download a file from S3 before opening a local copy (and to upload it after saving).

Other companies have used proxy files with subsequent conform to mitigate the delay (and cost) editors face using cloud storage solutions. Drastic lets you access these files directly, with frame accurate time code, closed captions, and metadata intact. Now you can fully realize the advantages of a cloud based content creation workflow with immediate access to your media. Simply pass video data to and from S3 as required rather than dealing only with the local file system.

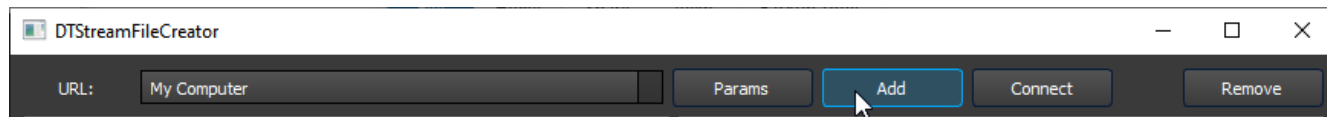
Drastic software products support direct access to cloud resources using HTTP, HTTPS, S3, and other file sharing methods. For the most part, the path to these files is a URL (e.g. <https://someserver/somefile>). Most software editing packages including Adobe's require that the file be directly accessible on local or network storage to be used. MediaReactor uses ".stream" files to bridge this gap and allow Adobe to read the file directly.

## 4.27.2 DTStreamFileCreator for S3 Access

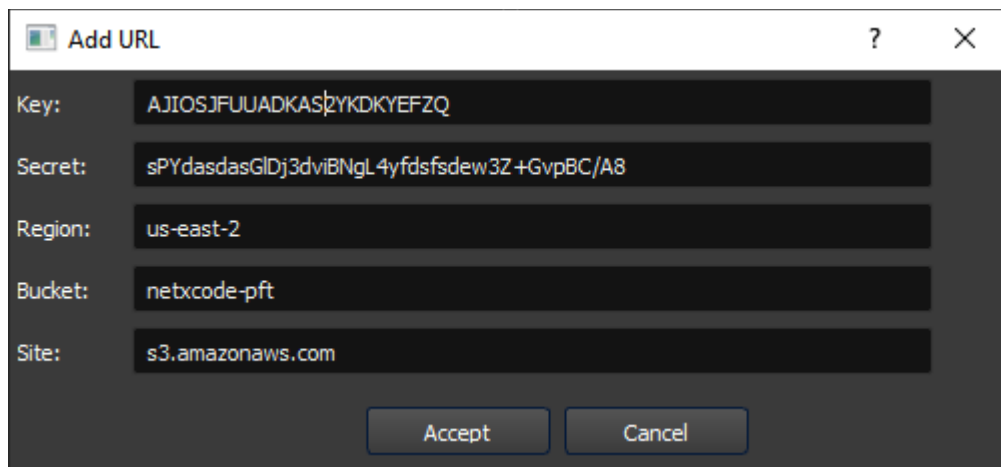
Run **DTStreamFileCreator**. It will be located in the same folder as the Drastic software it is being used with, e.g. C:\Program Files\MediaReactor\DTStreamFileCreator.exe.



Click the **Add** button to add a new S3 site.



This opens the **Add URL** window, where you can enter the details of the S3 assets.

A screenshot of a dialog box titled "Add URL". It contains five input fields: "Key:" with the value "AJIOSJFUUADKASZyKDKYEFZQ", "Secret:" with "sPYdasdasGIDj3dviBNGL4yfdsfedew3Z+GvpBC/A8", "Region:" with "us-east-2", "Bucket:" with "netxcode-pft", and "Site:" with "s3.amazonaws.com". At the bottom are "Accept" and "Cancel" buttons.

Key: AJIOSJFUUADKASZyKDKYEFZQ

Secret: sPYdasdasGIDj3dviBNGL4yfdsfedew3Z+GvpBC/A8

Region: us-east-2

Bucket: netxcode-pft

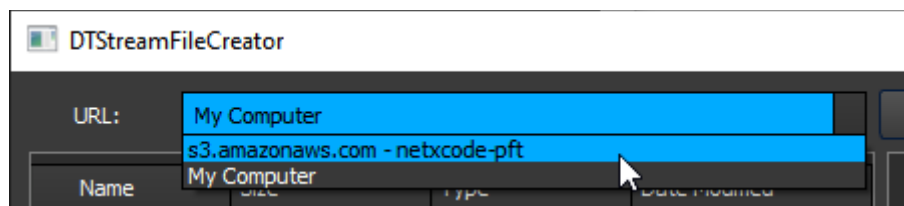
Site: s3.amazonaws.com

Accept Cancel

The parameters that need to be specified are:

- Key
- Secret
- Region
- Bucket
- Site

Once all the details have been entered, press the **Accept** button to create the .stream file. It will then appear in the dropdown, available for selection.

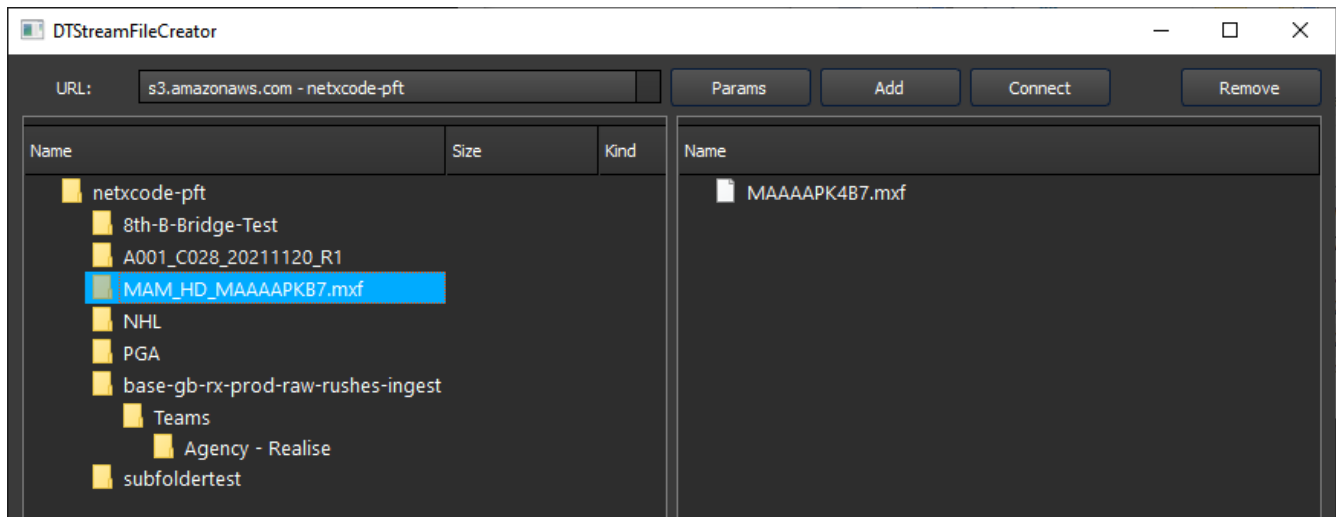
A screenshot of the "DTStreamFileCreator" window. The "URL:" field has a dropdown menu open, showing three options: "My Computer", "s3.amazonaws.com - netxcode-pft" (which is highlighted), and "My Computer".

DTStreamFileCreator

URL: My Computer  
s3.amazonaws.com - netxcode-pft  
My Computer

Name

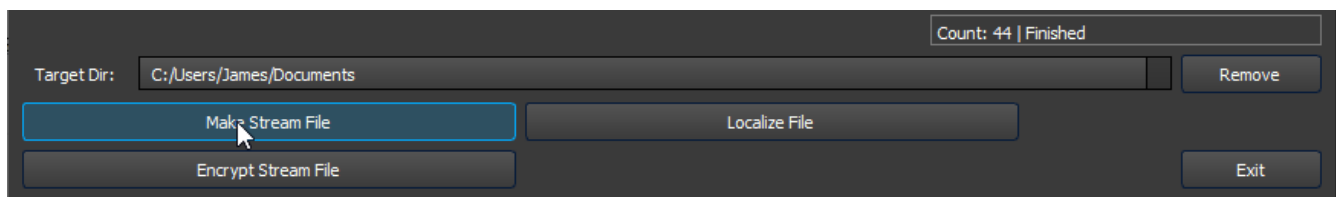
Select it, and click **Connect**. A properly formed .stream file will then show you the folder tree structure for the S3 assets you have specified.



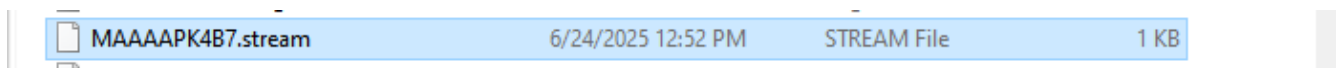
Select a file, and you will then be able to perform one of three actions.

#### 4.27.2.1 *Make Stream File*

**Make Stream File** - the most common workflow. Make a .stream file to use for Adobe S3 access.



The .stream file is quite small, typically weighing in at 1KB.



Inside the file will be something like:

s3://AKdsadasddsadsaFZQ:dSCPYYlwhIJGasfsafasfsavpBC/[A8@s3.amazonaws.com](mailto:A8@s3.amazonaws.com)/netxcode-pft/MAAAAAPK4B77.mxf (this is not a real link btw)

#### 4.27.2.2 *Localize File*

**Localize File** - copy a file to your target directory

#### 4.27.2.3 *Encrypt Stream*

**Encrypt Stream** - make a .stream file as above, but also encrypt its contents so its details cannot be intercepted. Instead of a file with the actual data (which could be pilfered), its contents would look more like:

```
:xa0UBaxtGQDQPPBk9cDZxP2UhZj1gOBxSAVwNTxZNCUddGGkqeyB6EmAOZSdpD0AmGHILciF9  
CVFwHzFcFlpyNAJbMmlBYE8PNXYBNx95HHQEYAJuF2tVJ1okH2QXdBRuG2QdLUM6bmAPTgJf  
FFQORQNKAKkSVRojAn8WYI4HUwRSC0ITPGJleApSFQ==
```

Direct access without a rootkey.csv is also supported by providing the ID:SecretKey on the URL before the site. The two parts must be separated by a colon (:) and the site name must be separated with an at sign (@): https://<id>:<secret>@s3.amazon.com/<bucket>/<file>.

https://MEOWJDNGFSUIGNWCAT:djJFASTjfowljgwowf8473sdjhH@s3.amazonaws.com/netxcode-pft/sourceABR.mp4

For more information on setting S3 and Object Storage access, please see

[Setting up Amazon S3 AWS Access](#)

## 5 Command Line Utilities

### 5.1 mrcmd

mrcmd - Drastic MediaReactor Command Line Interface

Build: 854

(c)copyright 1995-2025 Drastic Technologies Ltd. All rights reserved.

Usage: mrcmd [?] [-s#] [-e#] [-x#] [-y#] [-b#] [-q#] [-d#] [-k#] [-sm] [-r#] [-a#] [-c#] [-p#] [-F<audiofiletype>] [-AV] [-f<filetype>] [-v<codec>] [-n#] [-i#] [=P<profile>] <inputname> <outputname>

[] = optional

Parameters:

-s#	= start frame (def: 0)
-e#	= end frame (def: length of input)
-t	= allow transcode stream (def: convert stream)
-x#	= Horizontal size >1 (def: same as input)
-y#	= Vertical size >1 (def: same as input)
-b#	= Bit depth 8/16/24/32 (def: optimal)
-q#	= Video quality 0..10000 (def: highest)
-d#	= Video data rate >=0 (def: highest)
-k#	= Key frame distance (def: 15)
-s	= Separate audio files (def: internal)
-m	= Dual mono audio files (def: stereo, requires -s)
-r#	= Audio frequency/rate (def: same as input)
-a#	= Audio sample size 8/16 (def: same as input)
-c#	= Audio channels 1/2/4/5/6/8 (def: same as input)
-p#	= Audio quality 0..10000 (def: highest)
-i#	= Output video file ID (from codeclist.txt)
-f<filetype>	= Output video file type - AVI/MOV/OMF (def: auto sense)
-F<filetype>	= Output audio file type - WAV/AIF/AU (def: auto sense, requires -s)
-v<codec>	= Output video codec (text) - MMES/2yuv/DVSD (def: RGB uncompressed)
-n#	= Output video codec (numeric hex) - 88000001/1/a/f
-A	= Disable audio output (def: depends on input)
-V	= Disable video output (def: depends on input)
-P<profile>	= MediaReactor profile file path/name (optional)
<inputname>	= Input file path/name (required)
<outputname>	= Input file path/name (required)

To get a list of all the file types available in the file codeclist.txt, use  
mrcmd -all

To get a list of the codecs for a file type, use  
mrcmd #



## 5.2 mkrtindex

mkRtIndex - Make an rtin (RTIndex) file for a MOV, MXF, AVI, etc, by Drastic Technologies ([www.drastic.tv](http://www.drastic.tv))

Usage: mkRtIndex <sourcefile> [-v]

parameters must be in order

<sourcefile> File to be indexed.

-v Optional, verify rtIndex instead of create.

## 5.3 addtcmov (windows 32 only)

addtcmov - Add a time code track to a QuickTime movie file, by Drastic Technologies ([www.drastic.tv](http://www.drastic.tv))

Usage: addtcmov -i <moviefile> -s <tcframe> -t <tctype> -r [reelname]

-i <moviefile> QuickTime MOV to add tc track to

-s <tcframe> Integer time code frame number of first frame in movie file.

-t <tctype> Time code type

24 = 13

NonDropFrame = 2

DropFrame = 4

Pal = 8

50 = 16

59.94 = 32

59 special = 34

60 = 64

23.98 = 128

23.98 true = 132

hundredths = 68

-r <reelname> Reel name for file

## 5.4 mkrefmov (windows 32 only)

mkRefMov - Make a QuickTime reference movie file for a GXF, MXF, AVI, etc, by Drastic Technologies ([www.drastic.tv](http://www.drastic.tv))

Usage: ./mkrefmov -i <sourcefile> [-o <targetfile>]

-i <sourcefile> File to be referenced.

-o [targetfile] Optional, reference file name.

## 5.5 mrmetadata

mrmetadata - Extract metadata information from GXF, MXF, AVI, etc, by Drastic Technologies  
([www.drastic.tv](http://www.drastic.tv))

Build: 888

(c)copyright 1995-2025 Drastic Technologies Ltd. All rights reserved.

Usage: mrmetadata.exe -i <sourcefile> -qx -j # -k <picon.jpg> -e # -c -n 1 -w <output.wav> -m  
<reference.mov>

-i <sourcefile> File to be referenced.

Optional paramaters:

-q Quiet mode.

-x Do NOT export metadata XMLS

-j # Create a JPEG picon from frame #

-k <picon.jpg> Filename for JPEG picon frame

-e # Extract a JPEG picon for every # frame

-c Extract closed captioning

-n # First channel of source audio for the wave file (0,2,4)

-w <output.wav> Extract audio to a wave file

-m <reference.mov> Create a QuickTime reference file

## 5.6 mranalyze

mranalyze - Video/Audio analysis tool, by Drastic Technologies ([www.drastic.tv](http://www.drastic.tv))

Usage: ./mranalyze -a <source a> -b <source b> [-o <targetfile>]

- a <source a> Original file.
- b <source b> Compressed file.
- q Quiet (no output) must be first argument.
- p # PSNR type
- s # SSIM type (0-Square, 1=Guassian)
- m # MS-SSIM type
- g # Global checks (0-none, 1-basic, 2-advanced)
- o [targetfile] Optional, reference file name.

## 5.7 mrfix

mrfix - Change metadata in media files, by Drastic Technologies ([www.drastic.tv](http://www.drastic.tv))

Build: 888

(c)copyright 1995-2025 Drastic Technologies Ltd. All rights reserved.

Usage: mrfix -i <sourcefile> -m c [per mode parameters]

-i <sourcefile> File match string (e.g. \*.ari)

-q Quiet, minimal print outs

-t Test, and do not alter files

-m <mode> What kind of file operation:

a ARRI file metadata update

For mode details, specify the mode (e.g. mrfix -m a ?)

### ARRI Metadata

The ARRI file metadata is specified in pairs, after the main parameters above. Each pair consists of the element that should be changed, and what it should be changed to. There are three types of data: U32 (a 32 bit integer number, e.g. 24), R32 (a floating point value, e.g. 1.223) and U8 (a string with a maximum size, e.g. "this is metadata"). When specifying strings, quote marks must be used if the string contains spaces. For FPS settings, they can be specified as simple frame rates (e.g. 24, 25, 30) or non integer frame rates by multiplying by 1000 (e.g. 23976, 29970).

WhiteBalance U32

GreenTintFactor R32

WhiteBalanceFactorR R32

WhiteBalanceFactorG R32

WhiteBalanceFactorB R32

WBAppliedInCameraFlag U32

ExposureIndex U32

BlackLevel U32

WhiteLevel U32

LookFile U8[32]

SensorFps U32 (note: should match ProjectFPS)

ProjectFps U32 (note: should match SensorFPS)

CircleTake U32

ReelName U8[8]

SceneName U8[16]

TakeName U8[8]

Director U8[32]

DoP U8[32]

ProductionName U8[32]  
Company U8[32]  
Notes U8[256]  
SoundFileName U8[32]  
SoundRollName U8[32]  
SceneFileName U8[32]  
TakeFileName U8[32]  
Info U8[32]

Example command line:

```
mrfix -i V:\Test\*.ari -m a SensorFPS 24 ProjectFPS 24 ExposureIndex 1200 WhiteBalanceFactorR  
0.901 WhiteBalanceFactorG 1.0 WhiteBalanceFactorB 1.34 LookFile testlook.look Director "James L  
Brooks" Info "This is a line of information"
```

## 6 Appendix - Drastic DT3D Stereo File

The Drastic DT3D stereo file is an XML based re-director file that can merge two separate 'eye' files into a stereo pair, as well as adding audio and optional closed captioning.

DT3D Stereo File Format

Drastic Technologies Ltd

(c) Copyright 2005-2025, Drastic Technologies Ltd

All Rights Reserved

Contents:

-----

1. Overview
2. File Format
3. Samples

```
=====
=
=====
=
=====
=====
=====
=====
1. Overview
=====
=====
```

The .dt3d 'stereo' file is a text based XML file that specifies two separate files as the left and right eyes of a stereo pair. These files do not have to have a particular naming convention, or even be of the same file type, but their internal compression must be the same. The stereo file reader will open both video files, and an optional set of audio files, and combine them for 3D use in videoQC, Drastic DDR, Net-X-Code Server, MediaReactor, and other Drastic products.

```
=====
=
=====
=
```

```
=====
=====
=====
```

## 2. File Format

```
=====
=====
```

The file format is an ANSI or UTF-8 XML file using iso-8859-1 encoding. It has to use the file extension .dt3d to be recognized by the stereo reader plugin in Final Cut Pro, Premiere, Media Composer, etc. If you are only using Drastic or your own software, it can also use the .stereo extension. Extra information may be encoded at any point in the file, but at minimum there must be a Stereo tag with at least two File<number> tags to specify the right and left eye files.

All stereo files start with the xml type specifier:

```
<?xml version="1.0" encoding="iso-8859-1" ?>
```

This is normally followed by a comment specifying the file's purpose and where the format document can be retrieved:

```
<!-- Drastic stereo file redirector -->
```

```
<!-- Documentation http://www.drastictech.com/stereofileformat.txt -->
```

All of the important information for the stereo reader is contained within a Stereo tag pair

```
<Stereo>
```

```
</Stereo>
```

The stereo reader is designed to handle more than two video frames (eyes) per read, but for now it is only using two. Each file is enclosed in a File<number> tag pair. The numbering next to the File should be 0 and 1 for the left and right eyes:

```
<File0>
```

```
<!-- Left eye -->
```

```
</File0>
```

```
<File1>
```

```
<!-- Right eye -->
```

```
</File1>
```

within these tags are sub tags that specify where the video file is and any offset required to align the two eyes. A typical file tag area will look like this:

```
<File0>
```

```
    <!-- Optional directory, else current dir-->
```

```
    <Dir>C:\Optional</Dir>
```

```
    <!-- First file name -->
```

```
    <Name>test_l.avi</Name>
```

```
    <!-- Offset in frames -->
```

```
    <Offset>22</Offset>
```



</File0>

<Dir> - Optional, contains the directory or folder in which the file resides. If it is not specified, it is assumed the file is in the same directory as the stereo file.

<Name> - Required, contains the actual file name and extension of the media file. For sequences, simply specify the first name in the sequence and the rest will be found automatically

<Offset> - Optional, if present it will be the frame in the media file that will be read as frame 0. All frames in the file will be offset by this amount. If it is not specified, it is set to 0

There is also an optional <AudioFile> tag that can be used to specify an arbitrary separate audio file to be read with the video files. This section has the same format as the File<number> sections. If it is not specified, then audio will be read from the first (File0/left eye) video file.

An MCC or SCC closed captioning file may also be specified in a <ClosedCaptions> tag, using the same <File> tag as the audio and video formats.

```
=====
=
=====
=
=====
=====
=====
3. Samples
=====
=====
```

```
--snip-----
<?xml version="1.0" encoding="iso-8859-1" ?>
<!-- Stereo file redirector -->
<!-- http://www.drastictech.com/stereofileformat.txt -->
<Stereo>
  <!-- First file -->
  <File0>
    <!-- Optional directory, else current dir-->
    <Dir>C:\Optional</Dir>
    <!-- First file name -->
    <Name>test_1.avi</Name>
    <!-- Offset in frames -->
    <Offset>22</Offset>
  </File0>
  <File1>
```

```

<!-- Optional directory, else current dir-->
<Dir>C:\Optional</Dir>
<!-- First file name -->
<Name>test_r.avi</Name>
<!-- Offset in frames -->
<Offset>0</Offset>
</File1>
<!-- Optional audio file name. If not present then audio will be read from the first video file -->
<AudioFile>
  <!-- Separate audio file name -->
  <Name>test.wav</wave>
</AudioFile>
</Stereo>
-snip-----

-snip-----
<?xml version="1.0" encoding="iso-8859-1" ?>
<!-- http://www.drastictech.com/stereofileformat.txt -->
<Stereo>
  <File0>
    <Name>test_l.avi</Name>
  </File0>
  <File1>
    <Name>test_r.avi</Name>
  </File1>
  <AudioFile>
    <Name>test.wav</wave>
  </AudioFile>
</Stereo>
-snip-----

-snip-----
<?xml version="1.0" encoding="iso-8859-1" ?>
<!-- http://www.drastictech.com/stereofileformat.txt -->
<Stereo>
  <File0>
    <Name>test_l.avi</Name>
  </File0>
  <File1>
    <Name>test_r.avi</Name>
  </File1>
</Stereo>
-snip-----

```

```

-snip-----
<?xml version="1.0" encoding="iso-8859-1" ?>
<!-- Drastic Stereo file redirector -->
<!-- Documentation: http://www.drastictech.com/stereofileformat.txt -->
<Stereo>
  <!-- First/Left file -->
  <File0>
    <!-- First/Left file name -->
    <Name>T3D003013_Centre_fast_1080p60_l.yuv</Name>
    <!-- Offset in frames -->
    <Offset>0</Offset>
  </File0>
  <!-- Second/Right file -->
  <File1>
    <!-- Optional directory, else current dir-->
    <!-- <Dir>C:\Optional</Dir> -->
    <!-- Second/Right file name -->
    <Name>T3D003013_Centre_fast_1080p60_r.yuv</Name>
    <!-- Offset in frames -->
    <Offset>0</Offset>
  </File1>
  <!-- Base audio file name -->
  <AudioFile>
    <Name>../Audio_wav/T3a003y113_Centre_fast_act_unc.wav</Name>
  </AudioFile>
  <ClosedCaptions>
    <Name>T3D003013_Centre_fast_1080p60_r.mcc</Name>
  </ClosedCaptions>
</Stereo>
-snip-----

```

## 7 Appendix - Drastic DHDR/HDR YUV RAW Video Header Format

Drastic software can read many file formats which it does not natively understand. Formats that have a fixed video frame size and are logically organized can be described using the industry standard HDR text file format (NOTE: Not the still image HDR). This page describes the file format.

To do this a couple of basic criteria must be met:

- The frames within the stream or series of images, must be the same size.
- The frames must be in a supported compression format (see below)
- A header (.HDR/.STILLS) file must be created to describe the video

The HDR/.STILLS must be in the following format:

HDR File Format

Drastic Technologies Ltd.

(c) Copyright 1995-2025, Drastic Technologies Ltd.

All Rights Reserved

Contents:

-----

1. Overview
2. Settings
3. Calculations
4. Samples

```
=====
=
=====
=
=====
=====
=====
1. Overview
=====
=====
```

This document describes header (\*.dthdr/\*.hdr) file format for use with the Drastic Technologies dtx\_HdrYuv.d1x plug in for MediaReactor and QuickClip/VVW. This format has been in use for over 25

years in various forms as a \*.hdr. By default, Drastic software now writes and reads a \*.dthdr (as well as still reading the .hdr). The \*.dthdr is the same format with more capabilities including better audio, split long file and time code support. Herein are outlined the most common descriptors and their meanings as they have been standardized in our software. An updated version of this document is available at:

<http://www.drastictech.com/hdrfileformat.txt>

The basic concept of the HDR file is a text file that describes a simple video stream in which each frame is the same size, and its associated video and audio information. On disk, there will be 2 or more files, normally with the same starting name:

E:\TestRecord\Testing.dthdr  
E:\TestRecord\Testing.yuv  
E:\TestRecord\Testing.wav

In this example the yuv file contains all the captured frames (as opposed to individual numbered yuv files), the wav file contains the matched audio and the hdr file describes them as specified below. When loading these files into QuickClip or MediaReactor, the hdr file should be chosen to make sure all files are picked up properly. The basic format of the hdr file consists of a series of settings, each taking two text lines. The first line is the label and is always preceded by a percentage sign (%) and the second line is the value of the setting:

% Image Size (This line describes what the next line specifies)  
486 720 (This contains the values - NTSC 720 x 486)

```
=====
=
=====
=
=====
=====
=====
=====
2. Settings
=====
=====
```

-----  
% Color Format  
YUV420

This setting describes the format of the video frames within the file. The current possible formats are:

yuv422\_16 - 4:2:2 Planar YCbCr in I420 order, 16 bits per component

yuv422\_16le - Little endian 4:2:2 planar YCbCr in I420 order, 16 bits per component

yvu422\_16 - 4:2:2 Planar YCbCr in YV12 order, 16 bits per component  
 yvu422\_16le - Little endian 4:2:2 planar YCbCr in YV12 order, 16 bits per component  
 yuv422\_10 - 4:2:2 Planar YCbCr in I420 order, 10 bits per component in 16 bit container  
 yuv422\_10le - Little endian 4:2:2 planar YCbCr in I420 order, 10 bits per component in 16 bit container  
 yvu422\_10 - 4:2:2 Planar YCbCr in YV12 order, 10 bits per component in 16 bit container  
 yvu422\_10le - Little endian 4:2:2 planar YCbCr in YV12 order, 10 bits per component in 16 bit container  
 yuv422\_12 - 4:2:2 Planar YCbCr in I420 order, 12 bits per component in 16 bit container  
 yuv422\_12le - Little endian 4:2:2 planar YCbCr in I420 order, 12 bits per component in 16 bit container  
 yvu422\_12 - 4:2:2 Planar YCbCr in YV12 order, 12 bits per component in 16 bit container  
 yvu422\_12le - Little endian 4:2:2 planar YCbCr in YV12 order, 12 bits per component in 16 bit container  
 yuv422\_14 - 4:2:2 Planar YCbCr in I420 order, 14 bits per component in 16 bit container  
 yuv422\_14le - Little endian 4:2:2 planar YCbCr in I420 order, 14 bits per component in 16 bit container  
 yvu422\_14 - 4:2:2 Planar YCbCr in YV12 order, 14 bits per component in 16 bit container  
 yvu422\_14le - Little endian 4:2:2 planar YCbCr in YV12 order, 14 bits per component in 16 bit container  
 yuv444\_10 - 4:4:4 Planar YCbCr in I420 order, 10 bits per component in 16 bit container  
 yuv444\_10le - Little endian 4:4:4 planar YCbCr in I420 order, 10 bits per component in 16 bit container  
 yvu444\_10 - 4:4:4 Planar YCbCr in YV12 order, 10 bits per component in 16 bit container  
 yvu444\_10le - Little endian 4:4:4 planar YCbCr in YV12 order, 10 bits per component in 16 bit container  
 yuv444\_12 - 4:4:4 Planar YCbCr in I420 order, 12 bits per component in 16 bit container  
 yuv444\_12le - Little endian 4:4:4 planar YCbCr in I420 order, 12 bits per component in 16 bit container  
 yvu444\_12 - 4:4:4 Planar YCbCr in YV12 order, 12 bits per component in 16 bit container  
 yvu444\_12le - Little endian 4:4:4 planar YCbCr in YV12 order, 12 bits per component in 16 bit container  
 yuv444\_14 - 4:4:4 Planar YCbCr in I420 order, 14 bits per component in 16 bit container  
 yuv444\_14le - Little endian 4:4:4 planar YCbCr in I420 order, 14 bits per component in 16 bit container  
 yvu444\_14 - 4:4:4 Planar YCbCr in YV12 order, 14 bits per component in 16 bit container  
 yvu444\_14le - Little endian 4:4:4 planar YCbCr in YV12 order, 14 bits per component in 16 bit container  
 YUV420 - Planar YCbCr in IYUV/I420 order (ST/Thompson/MPEG Groups)  
 YV12 - Planar YCbCr in YV12 order  
 YUV422P - Planar YCbCr with 4:2:2 sub sampling (Sony)  
 YVU422P - Planar YCbCr with 4:2:2 sub sampling (chroma inverted)  
 V210 - Interleaved 10 Bit YCbCr v210 format (standard Quick Clip 10 Bit YCbCr)  
 YUV4224\_10 - Interleaved 10 Bit YCbCr v210 format with alpha/key channel  
 YUV4224 - Interleaved 8 Bit YCbCr yuv2/UYVY format with alpha/key channel  
 YUV422\_fields - Separate fields of 4:2:2 YCbCr (Crescent)  
 YUV422 - Interleaved 8 Bit YCbCr UYVY format (standard Quick Clip 8 Bit YCbCr) alias uyvy422  
 yuv422\_16 - Interleaved 16 Bit YCbCr UYVY format  
 yuv422\_16le - Little endian interleaved 16 Bit YCbCr UYVY format

UYVY422 - YUV 4:2:2 interleaved 8 bit packed as U Y V Y U Y V Y ...  
YUY2\_16 - YUV 4:2:2 interleaved 16 bit packed as Y U Y V Y U Y V ...  
YUY2\_16le - Little endian YUV 4:2:2 interleaved 16 bit packed as Y U Y V Y U Y V ...  
YUY2 - YUV 4:2:2 interleaved 8 bit packed as Y U Y V Y U Y V ...

DPXRGBLEFILL - DPX 10 bit RGB, little endian, filled  
DPXRGBLE - DPX 10 bit RGB, little endian, padded  
DPXRGBFILL - DPX 10 bit RGB, big endian, filled  
DPXRGB - DPX 10 bit RGB, big endian, padded  
DPXABGRLEFILL - DPX 10 bit ABGR, little endian, filled  
DPXABGRLE - DPX 10 bit ABGR, little endian, padded  
DPXABGRFILL - DPX 10 bit ABGR, big endian, filled  
DPXABGR - DPX 10 bit ABGR, big endian, padded

PRGB - 8 bit x 3 Planar RGB  
PRGBA - 8 bit x 4 Planar RGBA  
PBGR - 8 bit x 3 Planar BGR  
PABGR - 8 bit x 4 Planar ABGR  
PBGRA - 8 bit x 4 Planar BGRA  
PARGB - 8 bit x 4 Planar ARGB

RGBA - 32 Bit Interleaved RGB (TIFF)  
ARGB - 32 Bit Interleaved RGB (macOS)  
BGRA - 32 Bit Interleaved RGB (Windows BMP/TGA)  
BGR - 24 Bit Interleaved RGB (Windows BMP/TGA)  
RGB - 24 Bit Interleaved RGB (TIFF)  
TIFF24 - 24 Bit Interleaved RGB TIFF ordering  
TIFF32 - 32 Bit TIFF (same as RGBA)  
FULLDUAL - 10 bit dual frame YCbCr (stereo)  
Grey - 8 bit grey/gray plane of video data alias Gray  
DVSD - DVSD 'dv/dif' stream 4:2:0 or 4:1:1 8 bit SD  
DV25 - DV25 'dv/dif' stream 4:2:0 8 bit SD  
DV50 - DVCPPro 50 stream 4:2:2 8 bit SD alias avdv  
DV100 - DVCPPro HD/DV-100 stream 4:2:2 8 bit HD alias avd1  
AVCI100 - Panasonic AVCi 100  
DNXHD - Avid DNxHD stream alias av10, avd0~9  
IMX30 - Sony IMX MPEG 30 Mbit stream 4:2:2 8 bit  
IMX40 - Sony IMX MPEG 40 Mbit stream 4:2:2 8 bit  
IMX50 - Sony IMX MPEG 50 Mbit stream 4:2:2 8 bit

STEREO8 - Dual 8 bit YCbCr interleaved streams (one after another)  
STEREO10 - Dual 10 bit YCbCr interleaved streams (one after another)  
STEREO30 - Dual 10 bit RGB DPX interleaved streams (one after another)

STEREO32 - Dual 8 bit BGRA (windows order) interleaved streams (one after another)  
stereo12bgr - Dual 12 bit raw bayer (one after another)  
stereo12rggb - Dual 12 bit raw bayer (one after another)  
stereo12gbrg - Dual 12 bit raw bayer (one after another)  
stereo12grbg - Dual 12 bit raw bayer (one after another)

bggrbe12 - Bayer pattern, 12 bits per component packed big endian  
rggbbe12 - Bayer pattern, 12 bits per component packed big endian  
gbrgbe12 - Bayer pattern, 12 bits per component packed big endian  
grgbbe12 - Bayer pattern, 12 bits per component packed big endian  
bggr12 - Bayer pattern, 12 bits per component packed little endian  
rggb12 - Bayer pattern, 12 bits per component packed little endian  
gbrg12 - Bayer pattern, 12 bits per component packed little endian  
grbg12 - Bayer pattern, 12 bits per component packed little endian

ARRIBAYERDLRAW12 - ARRI dual link raw 12 bit bayer packed into YCbCr 10

\*\*\* DEPRECATED \*\*

RGB\_10 - 30 Bit DPX/Cineon Ordering  
RGB\_10LE - 30 Bit little endian DPX/Cineon ordering

\*\*\* NOT AVAILABLE \*\*

n/a YUV411 - Interleaved YCbCr DV Order  
n/a YUV411P - Planar YCbCr DV Order  
n/a YUV410 - Interleaved YCbCr 4:1:0  
n/a YUV410P - Planar YCbCr 4:1:0  
n/a YUVA444 - Interleaved 8 bit YCbCrAlpha (Adobe)  
n/a UYV444 - YUV 4:4:4 packed as U Y V U Y V ...  
n/a MJPEG - Motion JPEG

-----  
% Image Size (NbRows,NbCols)

486 720

The vertical and horizontal size of the video frame. Can be any size, but the following sizes are normal: 480x640, 480x704, 480x720, 486x720, 512x720, 576x704, 576x720, 608x720, 720x1280, 1080x1920, 1088x1920 (please note, the 'x' between the height and width is not supported. It must be a space in the hdr file)

-----  
% Number of Fields per Image (optional)

2

Number of separate images that make up a field. For most images this would be 1 indicating 1 full size plane with progressive or interleaved lines. If there are two separate images that need to be



interleaved, this would be set to 2. This value does not affect the Image Size above, that is always the absolute number of pixels vertically and horizontally. Please note: this is the correct interpretation of this value, previously we ignored this and recommended 2 where it should have been 1.

-----  
% Number of Image

1800

The number of individual frames in a file. If this value is larger than the actual number of frames available, it will be corrected, so if you are unsure set it to a very large value (e.g. 4000000)

-----  
% Frames per Second

29

The frame rate of the video frames. This may be any value, but some values have special meanings:

23 - Means 23.98

24 - Standard film

25 - PAL/25p/50i

29 - Means 29.97 - NTSC/29.97p/59.94i

30 - NTSC NDF/30p/60i

50 - 50p

59 - Means 59.94p (for 720p, 1080p, etc)

60 - Means 60p (for 720p, 1080p, etc)

-----  
% Header Offset (optional)

0

How far into the file the series of video frames starts

-----  
% Video Alignment (optional)

512

Alignment of each frame within the stream. If the frames are back to back this value will be 1. It is normal to pad each frame to align it to a disk sector for higher speed reads and writes. This value is normally either 0 (which indicates 1), 512 (windows), 4096 (sgi), 16384 (js)

-----  
% Video Line Pitch (optional)

1440

The number of bytes in one line of video. Especially important for YCbCr 10 bit when frame size is 1280x720 or 2048x1080

-----  
% Video Offset (optional)

0

How far into each frame, from the calculated start, the actual video starts

-----  
% Video Name (optional)

ThisFile.YUV

This is the name of the video file/stream associated with this header. Normally the video file has the same name as the hdr file, but with a .yuv extension. This allows the video name to be overridden to any file name.

-----  
% Audio Name (optional)

ThisFile.Wav

This is the name of an associated audio file. Normally QuickClip/MediaReactor looks for side bar wave or aiff files with the same name as the header file. This allows the audio file to be specified.

-----  
% Audio Format

Stereo

-----  
% Audio Frequency

48000

-----  
% Audio Block Align

4

-----  
% Audio Bits Per Sample

24

-----  
% Timecode (optional)

01:00:00:00

This is the time code value of the first frame. The time is assumed to run contiguously from this point.

-----  
% Userbits (optional)

BAADF00D

This is the user bits returned for this stream. It is assumed it is the same for all video frames.

% Start Frame (optional)

100

This specifies the first video frame of the stream. By default, this is 0, but in a circular file the last frame written may not be the last frame of the file. In the case above, if start frame is 100, the last frame written was 99. The reader will read from 100->end of file and then 0->99 automatically.

-----  
% Max Segment (optional)

1296000

This specifies how long one segment of a multi segment record will be. Defaults to 12 hours (above is 12 hours in frames, NDF 30).

Please note, comments and other information may exist in the file, but if the file is re-written by QuickClip or VVW, then that information will be lost.

=====

=

=====

=

=====

=====

=====

### 3. Calculations

=====

=====

Total Frame Pixels = <% Image Size (NbRows,)> \* <% Image Size (,NbCols)>

(1)Frame Size = <size of video file> / <% Number of Image>

(2)Frame Size =

YUV420 (<totalframepixels> + (<totalframepixels> / 2))

YUV411P (<totalframepixels> + (<totalframepixels> / 2))

YUV422P (<totalframepixels> \* 2)

YUV411 (<totalframepixels> + (<totalframepixels> / 2))Order

YUV422 (<totalframepixels> \* 2)

YUV422\_10 (<totalframepixels> \* 16 / 6)

YUVA444 (<totalframepixels> \* 4)

RGBA (<totalframepixels> \* 4)

RGB (<totalframepixels> \* 3)

RGB\_10 (<totalframepixels> \* 4)

RGB\_10LE (<totalframepixels> \* 4)

\*NOTE: 720x1280 in YUV422\_10 is a special case. Please use a (1) calc for this

(1) Aligned Frame Size = <size of video file> / <% Number of Image>

(2) Aligned Frame Size = (((<Frame Size> + <% Video Alignment> - 1) / <% Video Alignment>) \* <% Video Alignment>

\*NOTE: Above math MUST be integer to work properly

Seek to a frame offset = <required frame number> \* <Aligned Frame Size>

```
=====
=
=====
=
=====
=====
=====
=====
4. Samples
=====
=====
```

calendar\_01.hdr

-snip-----

% Color Format (YUV420, YUV422, YUV422P, YUV422\_10, RGB, RGBA)

YUV422P % Planar 422

% Image Size (NbRows,NbCols) (576 720, 486 720, 720 1280, 1080 1920)

576 720 % PAL Size

% Number of Fields per Image

1 % Both fields in single frame group

% Number of Image

12 % If greater then actual, reader will correct

% Frame per second

25 % PAL rate

%% Video Alignment

%512 % no alignment

%% Video Name

% optional e:\calendar\_01.yuv

% Audio Format

%Stereo % none, should be wav or aiff

% timecode

00:00:00;00 D

% userbits

FFFFFFFF

% Start Frame

0

-snip-----

table\_tennis.hdr (mpeg test stream)

-snip-----

% Color Format

YUV420

% Image Size (NbRows,NbCols)

288 352

% Number of Fields per Image

1

% Number of Image

250

% Frame per second

25

-snip-----

(c)copyright 1995-2025 Drastic Technologies Ltd. All Rights Reserved.

Drastic Technologies Ltd. does not assume responsibility for loss or damage resulting from errors, omissions, or inaccuracies herein. This document is subject to change, and revisions may be made and issued to include such changes.

No part of this document may be reproduced, saved to a storage and retrieval system, or transmitted in any form or by any means, electronic, mechanical, recorded, or otherwise without the prior written consent of Drastic Technologies Ltd.

This manual has been compiled to assist the user in their experience using **DrasticScope** software. It is believed to be correct at the time of writing, and every effort has been made to provide accurate and useful information. Any errors that may have crept in are unintentional and will hopefully be purged in a future revision of this document. We welcome your feedback.

Drastic Technologies Ltd  
523 The Queensway, Suite 201  
Toronto, ON, M8Y 1J7  
Canada  
(416) 255 5636  
(416) 255 8780

Copyright 2025 © Drastic Technologies Ltd. All rights reserved. Software products licensed are owned by Drastic Technologies Ltd. and are protected by international treaty provisions and national copyright laws. All Rights Reserved.