



TIME SHIFTER

Transmission Time Shifting

(Rev. 2.1 ENG)



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1 INTRODUCTION

Axel Technology's **Time Shifter TV** is a powerful automatic system that manages ingest and playback of TV transmission to be re-broadcasted with time delay.

All in 1 compact rackmount unit to easily create new channels(+1h,+2h...+24h etc.) or to re-broadcast the transmission in different time zones.

Time Shifter also features a high quality logo generator to add graphical content like station ID, clock and tickers.

The system is fully automated, no needing user intervention, to produce new channels at zero costs.



Time Shifter TV is the special interaction between the Axel Technology's **DMLRecorder**(assigned to video recordings) and a specific Axel Technology's **XPlayout** setting(assigned to video playout).

DMLRecorder storages the realized recordings in a specific folder defined by the user, in our case W:/Media. After some minutes defined by the user, **XPlayout** in Time Shifting Mode, progressively re-broadcasts the same files saved in that folder(W:/Media in our case).



2 DML RECORDER SETTINGS

Firstly you have to set in **DMLRecorder** the folder path in which files will be saved.



Run the DMLRecorder from your desktop icon DMLRecorder

From the DMLRecorder main window click on the Config button as shown in the following picture.







Type from your keyboard the folder path in which your video recordings will be saved, or press the **Browse** button to select the folder with the mouse.



Be sure you have selected the option "Stop Rec every n minutes" and type the minutes time, we suggest you tu set it at 20 as shown in the following picture.

Config							
Path for recordings :W:\Media\		Browse					
Path for status and logs :C:\Program Files (x86)\DML Recorder\StatusAnd	iLogs	<u>B</u> rowse					
Post batch : <u>B</u> rowse %2	Tile						
Language English 🔍 📀 Stop Rec at	the ho						
Channel ID Dml ch1 💿 Stop Rec ev	very n minutes	20					
📄 Start recording automatically 📄 Vox start 💦 💿 Stop Rec siz	ze in MB	680					
Rec file type 🛛 🗸 🗸 💽 24 hour Rec	LTC						
Stop Rec if storage too small Recording Stop	Shift in Sec	0.00					
🔽 Disable real time video preview, just grab 👘 🦷 WM streamin	ng port	8080					
Delete Oldest Files % Disk Free 20 Streaming bitrate	•	100 Кьр 👻					
Start minimized							
Input Devices Video Size Video Settings Alarm	n Settings	Load Config					
Crossbar Tuner Audio Settings Cal	lculator	Save Config					
EzSetup wizard	<u>C</u> ancel						



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Click on the Video Setting button as shown in the following picture.

Path for recordings :W:\Media\ Path for status and logs :C:\Program Files (x86)\DML Post batch : Browse Language English Channel ID Dml ch1 Start recording automatically Vox start Rec file type AVI Stop Rec if storage too small Stop Rec if storage too small Disable real time video preview, just grab
Path for status and logs : C:\Program Files (x86)\DML Post batch : Post batch : Browse Language English Channel ID Dml ch1 Start recording automatically Vox start Rec file type AVI Stop Rec size in MB Stop Rec LTC ecording Stop Shift in Sec 0.00 WM streaming port
□ Post batch : Browse 32 file Language English Stop Rec at the hour 30 Channel ID Dml ch1 Stop Rec every n minutes 20 Start recording automatically Vox start Stop Rec size in MB 680 Rec file type AVI 24 hour Rec LTC 24 hour Rec LTC □ Stap Rec if storage too small ecording Stop Shift in Sec 0.00 □ Disable real time video preview, just grab WM streaming port 8080
Language English Stop Rec at the hour Channel ID Dml ch1 Stop Rec every n minutes 20 Start recording automatically Vox start Stop Rec size in MB 680 Rec file type AVI 24 hour Rec LTC ecording Stop Shift in Sec 0.00 Stop Rec if storage too small VI WM streaming port 8080
Channel ID Dml ch1 Image: Stop Rec every n minutes 20 Image: Start recording automatically Image: Vox start Image: Stop Rec size in MB 680 Rec file type Image: Avi mark Image: Avi mark
Start recording automatically Vox start Stop Rec size in MB 680 Rec file type AVI 24 hour Rec LTC Stop Rec if storage too small ecording Stop Shift in Sec 0.00 Disable real time video preview, just grab WM streaming port 8080
Rec file type AVI 24 hour Rec LTC Stop Rec if storage too small ecording Stop Shift in Sec 0.00 Disable real time video preview, just grab WM streaming port 8080
Stop Rec if storage too small ecording Stop Shift in Sec 0.00 Disable real time video preview, just grab WM streaming port 8080
🔽 🗹 Disable real time video preview, just grab
🔽 Delete Oldest Files % Disk Free 20 Streaming bitrate 100 Kbp 💌
Start minimized
Input Devices Video Size Video Settings Alarm Settings Load Config
Crossbar Tuner Audio Settings Calculator <u>S</u> ave Config
EzSetup wizard OK Cancel



The **Video Setting** panel will be opened. Uncheck the "Enable Overlay" option to do not show recordings date and time from your recorded video files.

Video Settings
r Codec
Video Codec DivX® 6.8.3 Codec (8 Logical 👻
nfigure
Fileds type
Text Overlay
Enable Overlay Configure
Extra
Use DS Reference Clock
Dvd subtitles in AVIs
<u>_</u> K



Video Settings
Г ^{Codec}
Video Codec DivX® 6.8.3 Codec (8 Logical 🔽
Configure
Fileds type
Text Overlay
Enable Overlay Configure
r Extra
Use DS Reference Clock
Dvd subtitles in AVIs
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From the Codec section of the Video Settings panel, click on Configure to set your recording codec(We suggest you the DivX codec)



Change the bitrate of your recordings, depending on the free space you have on your storage device. More bitrate you select, more video quality you will have and more hard disk space will be used for a single video file.

DivX® Codec Properties	x
PRO V.6.8	
Experience the future of DivX technology today - www.divxlabs.com	7
Main Codec Video	
Unconstrained Unconstrained The parameters you have sel outside of es, which means playable in devices. Encoding presets Use presets to configure the encoder SPEED Use in the indevice of the encoder OUALITY	
Rate control Rate control mode: Bitrate: 10000 kbps In this mode bitrate is the most significant quality factor. Higher bitrates lead to better quality but larger files.	
Advanced Restore defaults OK Cancel	



3 XPLAYOUT SETTINGS



By clicking on your desktop XPlayout icon, launch the software to re-broadcast your DML recorded video files

XPlayout	XTv Suite v. 7.6.21 11:02:29	-16%	20 July 2015	
Clip Path	Name	STOP		-10 -12 -18
Play Split 📲 🕨	SENDER DURATION POSITION	REMAIN PLAYLIST REMAIN	DELAY CODEC	-20
Autofill >= Auto Logo Swit	cher IIII Prep. Next 🔊 Exact Time	Loop C A	Automatic 🔕 Manual 🕥	J
GRID MODE GRAPHIC MODE				FUNCTIONS
Day Time Real Time Duration Su	ut Title	Status P Media	Location Add	Playlist Manager Jingle Machine Graphics Edit Graphics
				File Interlacing Air Logs System Logs Device Manager
				Launch XScheduler System Settings
				•
۲				
Insert Clip Change Clip Prep	are Trim Move Up 🔨	Remove Clear Aired	Test Clip Autoscroll	• • • • • • • • • • •
Browse Edit	Clip Duplicate Move Down 🗸		Test All Clips Clear Playlist	Lock - 🔀

XPlayout	ХТ¥ Suite v. 7.6.21	11:02:29		20	0 July 2015	
	Clip Name Path		STOP	-11		-10 -12 -2
Play Split 📲 🕨	GENDER DURATION	POSITION REMAIN	PLAYLIST REMAIN	DELAY	CODEC	
Autofill > 🚍 Auto Logo 🔳	Switcher III Prep. Next	Exact Time	Loop C	Automatic	Manual 🕥	
GRID MODE GRAPHIC MODE	on Sut Title	Status	Media		Locatior Add	FUNCTIONS
						File Interlacing Air Logs System Logs Device Lanager
						Launch XScheduler System Settings
						•
						•
						. 29 .
					,	
Insert Clip Change Clip Browse	Prepare Trim Edit Clip Duplicate	Move Up A Remove	Clear Aired	Test Clip Test All Clips	Autoscroll Clear Playlist	Lock

Click on the System Settings button to set your XPlayout in Time Shifting Mode as shown in the following picture





Frome the **Config** panel, enter in the **Mode Settings** section as shown in the following picture.





The next screen will be opened, as shown in the following picture





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In the following picture, the panel zone for Time Shifter settings is the red squared zone.

Config	
Audio/Video	r Slave Mode
Misc	Master IP
Extra	Max Delay (sec) 20 Align reposition (frames) Master Playlist folder
Virtual Device	
Routing Switch	Time Shifting mode ✓ Enable timeshifting mode
VCR	Cut filler if next file is present
Line	Media folder W:\Media\
Cart	XMusic
Text & Graphics	XMusic IP Test
Character Gen.	
Mode Settings	
Subtitle	
	Setup Wizard Set Cancel



Enable timishifting mode: enabling this parameter you turn the XPlayout as a Time Shifted playout software.

Minutes to time shift: Assign here the time shift for the re-broadcast. Minutes will be calculated from the starting point of the original video broadcast(in our example we have 60 minutes: to give you an example of a +1 channel)

Cut filler if next file is present: check this parameter if you want to cut filler if next file is present.

Media folder: Assign here the folder path from which you want to automatically re-broadcast your video files. It has to be the same of the **DMLRecorder** folder path.



Click on **SET** to confirm **Time Shifting mode** settings as shown in the picture.

Config	
Audio/Video	Slave Mode
Misc	Enable slave mode Master IP
	Max Delay (sec) 20 Align reposition (frames)
Extra	Master Playlist folder
Virtual Device	
Routing Switch	TimeShifting mode
VCR	Minutes to time shift 60
Line	Media folder
	W:\Media\
Cart	
Text & Graphics	XMusic IP Test
Character Gen.	
Mode Settings	
Subtitle	
Subtrice	
	Setup Wizard Set Cancel

To confirm the Time Shifting mode, XPlayout will be restarted. So, click on <u>Yes</u> in the following window.





:15% XPlayout 11:06:50 20 July 2015 Clip Name STOP Path GENDER DURATION POSITION REMAIN YLIST REMAIN DELAY CODEC Play Split 🕂 Switcher Prep. Next 💫 Exact Time C Automatic Autofill > = Auto Logo 📃 Manual 🔘 GRID MODE GRAPHIC MODE FUNCTIONS Real Time Duration Sut Title Locatior Add Edit Graphics Playlist Manage lingle Machin Graphics Air Logs Device Manager File Interlacing System Logs System Settings unch XScheduler • •* 4 \bigcirc * • • • • • Insert Clip Change Clip Trim ~ Clear Aired Test Clip Autoscroll Prepare Move Up Remove - 💌 Edit Clip Duplicate Move Down 🗸 Test All Clips Clear Playlist Browse Lock

Once the XPlayout will be restarted, you will see the green Time Shifting Mode words.



4 TIME SHIFTER PLAYOUT

The playout of your **DML** recorded file will start after the previously set minutes in System Settings > Time Shifting Mode example) as shown in the following picture.

(60	minutes	in	our

Minutes to time shift 60

XPlayout	XT v Suite v. 7.6.21 10:00:13	66X	21 -	July 2015	
Clip Name OS Path With	1:00:00 21/07/2015 Media\x 2015-07-21 09.00.00 2015-07-21 08.00	ON-AIR			
Gender Play Split ←>	DURATION POSITION 00:19:59.22 00:00:22.11	REMAIN PLAYLIST REMAIN 00:19:37.11 00:19:37.11	_{DELAY} Manual D	CODEC DivX 5.0 codec	
Autofill > Auto Logo 🖪 Switcher	Prep. Next 😒 Exact Time C	Loop C	Automatic 🙆 M	Manual 🕜	
GRID MODE GRAPHIC MODE		Status P Media		Locatior Add	FUNCTIONS
Manual Manual 09:45:18 00:14:33 01 08:45: Manual Manual 09:59:51 00:20:00 01 09:00:	27 21/07/2015 00 21/07/2015	Aired W\Media\x 2015-07-21 On Air W\Media\x 2015-07-21	08.45.27 2015-07-21 0 09.00.00 2015-07-21 0	07. HDR1 08. HDR1	Playlist Manager Jingle Machine Graphics Edit Graphics
					Launch XScheduler
					••••••
					•
					• 13 •
Insert Clip Change Clip Prepare	Trim Move Up 🔨	Remove Clear Aired	Test Clip	Autoscroll	• •
Browse	Duplicate Move Down 💙		Test All Clips	Clear Playlist	Lock



5 FINAL CONSIDERATIONS & AXEL TECHNOLOGY CONTACTS

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