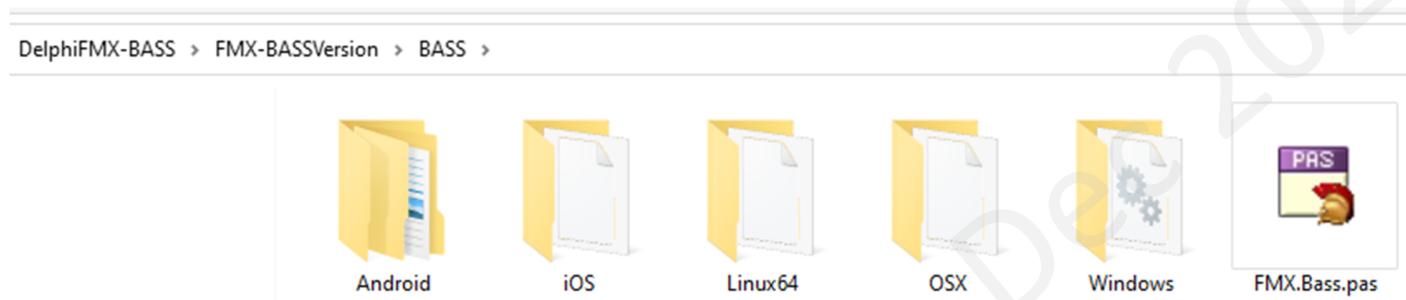


What are necessary files and Where to put them ?

The BASS folder contains all binaries of BASS audio library for all platforms that Delphi's FireMonkey framework supports, and Delphi's FMX.BASS header unit:

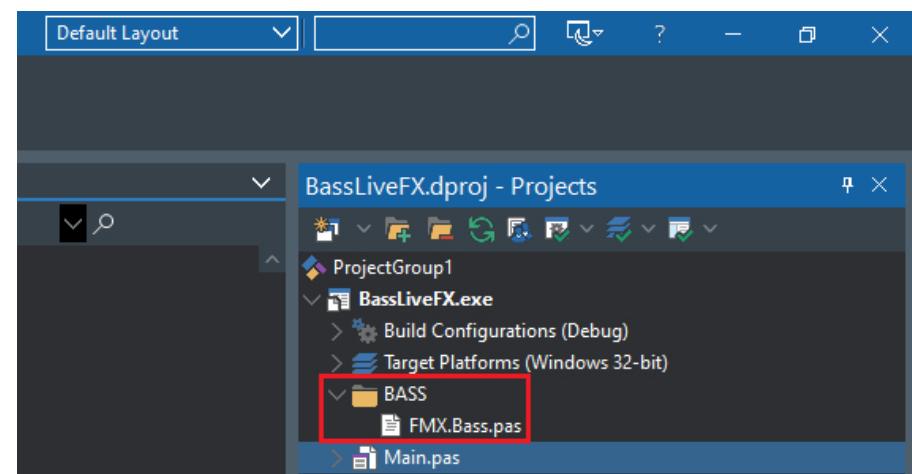
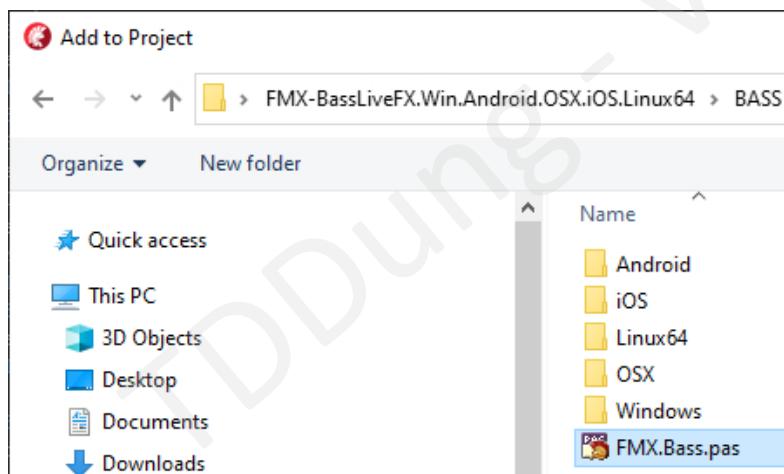
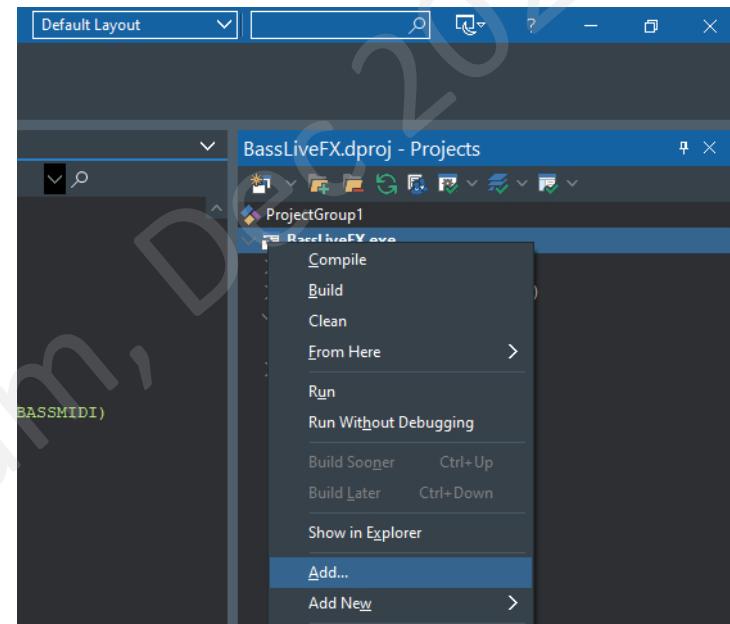
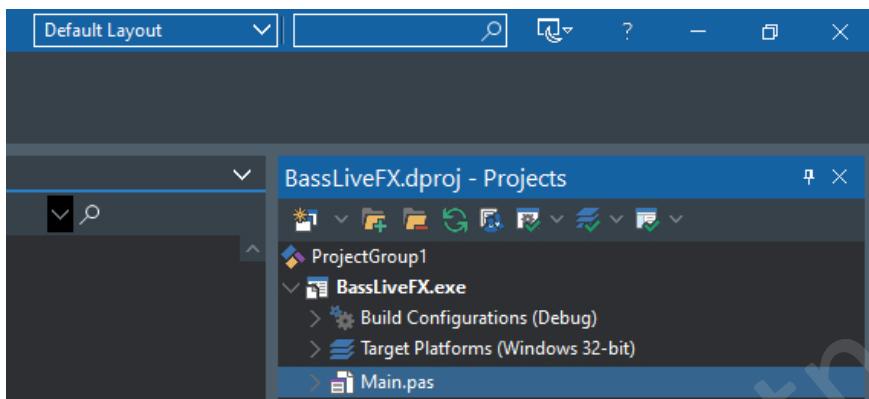


For the purpose of this distribution package, this BASS folder is to be put into the same folder of a Delphi project:

Name	Date	Type	Size	Length
BASS	1/15/2021 3:42 AM	File folder		
LaunchScreen.Tem...	1/15/2021 3:39 AM	File folder		
Output	1/15/2021 3:44 AM	File folder		
AndroidManifest.te...	8/23/2020 5:55 AM	XML Document	2 KB	
Entitlement.Templa...	8/23/2020 5:55 AM	XML Document	1 KB	
Entitlement.Templa...	8/23/2020 5:55 AM	XML Document	1 KB	
info.plist.Templatei...	8/23/2020 5:55 AM	XML Document	1 KB	
info.plist.Template...	8/23/2020 5:55 AM	XML Document	1 KB	
Main.fmx	12/22/2020 1:50 AM	FireMonkey Form	1 KB	
Main.pas	1/15/2021 3:39 AM	Delphi Source File	1 KB	
Test.deployproj	1/15/2021 3:39 AM	RAD Studio Deplo...	69 KB	
Test.dpr	1/15/2021 3:39 AM	Delphi Project File	1 KB	
Test.dproj	1/15/2021 3:39 AM	Delphi Project File	131 KB	
Test.dproj.local	1/15/2021 3:39 AM	LOCAL File	2 KB	
Test.identcache	1/15/2021 3:39 AM	IDENTCACHE File	1 KB	
Test.res	1/15/2021 3:39 AM	RES File	1 KB	

How to use Delphi's FMX.BASS header unit?

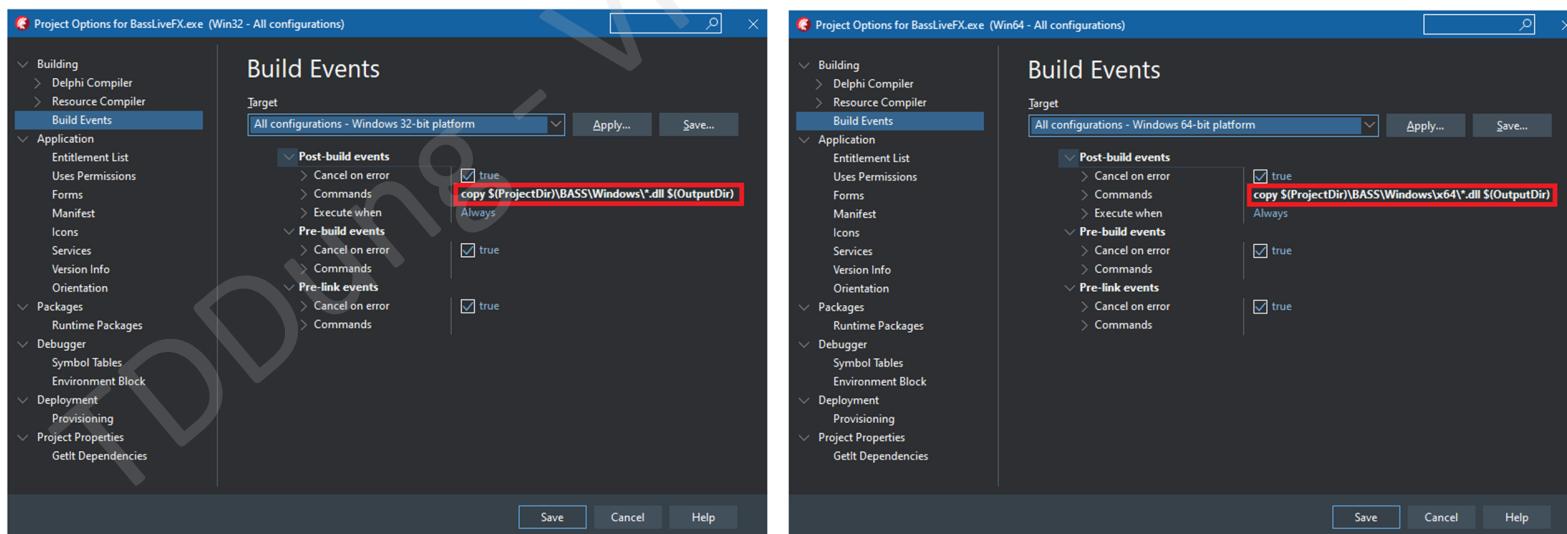
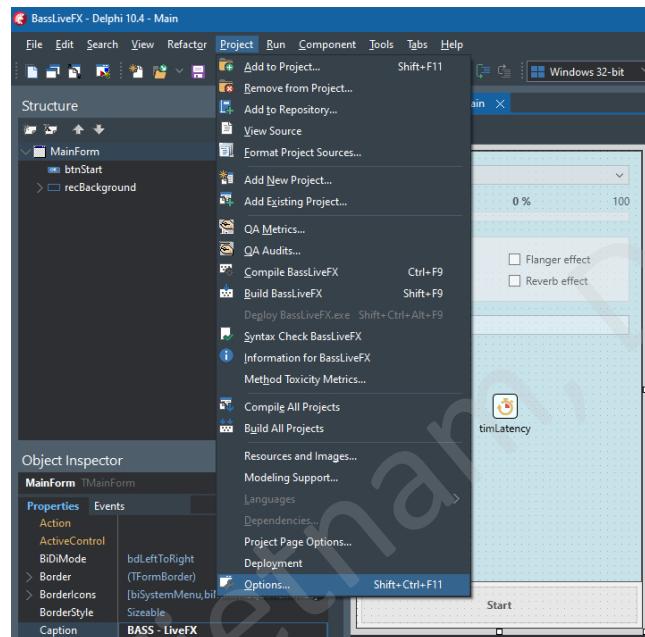
Add FMX.BASS unit into a Delphi FMX project:



Windows (32/64)

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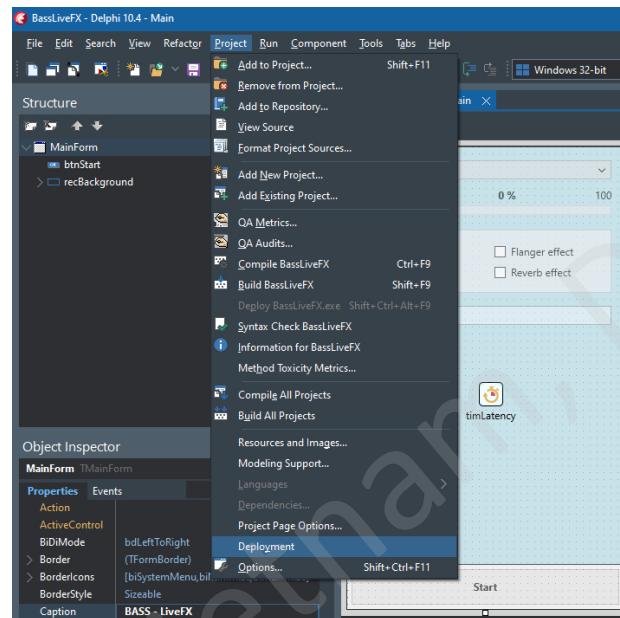
Use Build Events to deploy necessary DLL runtime library:



Mac OS (64)

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Use Deployment to deploy necessary DYLIB runtime library:



Local Path	Local Name	Type	Configurat...	Platforms	Remote Path	Remote Name	Remote Status	Overwrite
\$BDS\bin\	delphi_PROJECTICNS.icns	ProjectOSXRes...	Debug	[OSX64]	Contents\Resources\	BassLiveFX.icns	Not Connected	Always
\$BDS\bin\	delphi_PROJECTICNS.icns	ProjectOSXRes...	Release	[OSX64]	Contents\Resources\	BassLiveFX.icns	Not Connected	Always
	BassLiveFX	ProjectOutput	Debug	[OSX64]	Contents\MacOS\	BassLiveFX	Not Connected	Always
	BassLiveFX.info.plist	ProjectOSXInfo...	Debug	[OSX64]	Contents\	Info.plist	Not Connected	Always
	BassLiveFX.dSYM	ProjectOSXDe...	Debug	[OSX64]	..\\$(PROJECTNAME).ap...	BassLiveFX	Not Connected	Always
	BassLiveFX.entitlements	ProjectOSXEnt...	Debug	[OSX64]	\	BassLiveFX.entitlements	Not Connected	Always
	BassLiveFX.info.plist	ProjectOSXInfo...	Release	[OSX64]	Contents\	Info.plist	Not Connected	Always
	BassLiveFX.entitlements	ProjectOSXEnt...	Release	[OSX64]	\	BassLiveFX.entitlements	Not Connected	Always
	BassLiveFX.dSYM	ProjectOSXDe...	Release	[OSX64]	..\\$(PROJECTNAME).ap...	BassLiveFX	Not Connected	Always
	BassLiveFX	ProjectOutput	Release	[OSX64]	Contents\MacOS\	BassLiveFX	Not Connected	Always

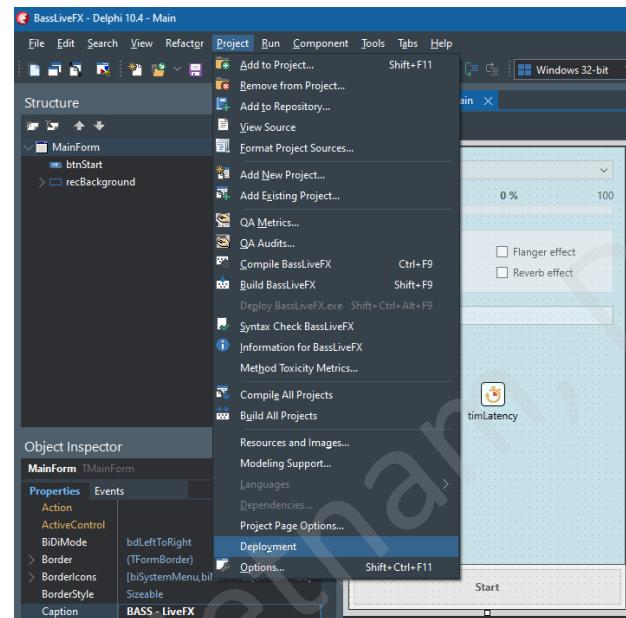
This screenshot shows two windows related to deployment. The top window is a deployment table for 'All configurations - macOS 64-bit platform', identical to the one above but with additional rows for 'libbass.dylib'. The bottom window is a file explorer showing the local file structure, specifically the 'libbass.dylib' file located in the 'BASS' folder under 'OSX'. An orange arrow points from the 'Deployment' table in the top window down to the 'libbass.dylib' file in the file explorer.

Local Path	Local Name	Type	Configurat...	Platforms	Remote Path	Remote Name	Remote Status	Overwrite
\$BDS\bin\	delphi_PROJECTICNS.icns	ProjectOSXRes...	Debug	[OSX64]	Contents\Resources\	BassLiveFX.icns	Not Connected	Always
\$BDS\bin\	delphi_PROJECTICNS.icns	ProjectOSXRes...	Release	[OSX64]	Contents\Resources\	BassLiveFX.icns	Not Connected	Always
	BASS OSX\	File	Debug	[OSX64]	Contents\	libbass.dylib	Not Connected	Always
	BASS OSX\	File	Release	[OSX64]	Contents\	libbass.dylib	Not Connected	Always
	BassLiveFX	ProjectOutput	Debug	[OSX64]	Contents\MacOS\	BassLiveFX	Not Connected	Always
	BassLiveFX.info.plist	ProjectOSXInfo...	Debug	[OSX64]	Contents\	Info.plist	Not Connected	Always
	BassLiveFX.dSYM	ProjectOSXDe...	Debug	[OSX64]	..\\$(PROJECTNAME).ap...	BassLiveFX	Not Connected	Always
	BassLiveFX.entitlements	ProjectOSXEnt...	Debug	[OSX64]	\	BassLiveFX.entitlements	Not Connected	Always
	BassLiveFX.info.plist	ProjectOSXInfo...	Release	[OSX64]	Contents\	Info.plist	Not Connected	Always
	BassLiveFX.entitlements	ProjectOSXEnt...	Release	[OSX64]	\	BassLiveFX.entitlements	Not Connected	Always
	BassLiveFX.dSYM	ProjectOSXDe...	Release	[OSX64]	..\\$(PROJECTNAME).ap...	BassLiveFX	Not Connected	Always
	BassLiveFX	ProjectOutput	Release	[OSX64]	Contents\MacOS\	BassLiveFX	Not Connected	Always

Linux (64)

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Use Deployment to deploy necessary SO runtime library:



The Deployment page shows the configuration for the 'All configurations - Linux 64-bit platform'. It lists items under 'Local Path' and 'Remote Path'. A checkbox is checked for 'Output\Linux64\Debug\BassLiveFX'. The 'Remote Name' column shows 'BassLiveFX' and the 'Remote Status' column shows 'Not Connected'. An orange arrow points from the text 'Similar to Mac OS (64)' to the 'Local Path' column.

Local Path	Local Name	Type	Configurat...	Platforms	Remote Path	Remote Name	Remote Status	Overwrite
Output\Linux64\Debug\BassLiveFX	BassLiveFX	ProjectOutput	Debug	[Linux64]	\	BassLiveFX	Not Connected	Always

Similar to Mac OS (64) to select the SO file

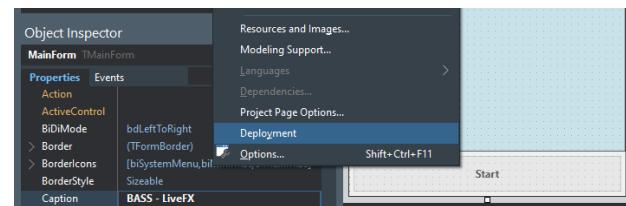
The Deployment page shows the configuration for the 'All configurations - Linux 64-bit platform'. It lists items under 'Local Path' and 'Remote Path'. Two rows are highlighted with a red border: one for 'BASS\Linux64\libbass.so' and another for 'BASS\Linux64\libbass.so'. Both rows have 'File' listed in the 'Type' column, 'Release' and 'Debug' listed in the 'Configurat...' column, '[Linux64]' listed in the 'Platforms' column, and '\.' listed in the 'Remote Path' column. The 'Remote Name' column shows 'libbass.so' for both rows. The 'Remote Status' column shows 'Not Connected' for both rows, and the 'Overwrite' column shows 'Always' for both rows.

Local Path	Local Name	Type	Configurat...	Platforms	Remote Path	Remote Name	Remote Status	Overwrite
BASS\Linux64\libbass.so	libbass.so	File	Release	[Linux64]	\.	libbass.so	Not Connected	Always
BASS\Linux64\libbass.so	libbass.so	File	Debug	[Linux64]	\.	libbass.so	Not Connected	Always
Output\Linux64\Debug\BassLiveFX	BassLiveFX	ProjectOutput	Debug	[Linux64]	\.	BassLiveFX	Not Connected	Always

Android (32/64)

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Use Deployment to deploy necessary SO runtime library:



All configurations - Android 32-bit platform								
Local Path	Local Name	Type	Configur...	Platforms	Remote Path	Remote Name	Remote Status	Overwrite
\$(BDS)\bin\Artwork\..	FM_SplashImage_42x3...	Android_Splas...	Debug [Android]	res\drawable-ldpi\		splash_image.png	Not Connected	Always
\$(BDS)\bin\Artwork\..	FM_NotificationIcon_36...	Android_Notify...	Debug [Android]	res\drawable-hdpi\		ic_notification.png	Not Connected	Always
\$(BDS)\bin\Artwork\..	FM_NotificationIcon_96...	Android_Notify...	Debug [Android]	res\drawable-xxhdpi\		ic_notification.png	Not Connected	Always
\$(BDS)\bin\Artwork\..	FM_NotificationIcon_24...	Android_Notify...	Debug [Android]	res\drawable-mdpi\		ic_notification.png	Not Connected	Always
\$(BDS)\bin\Artwork\..	FM_NotificationIcon_48...	Android_Notify...	Debug [Android]	res\drawable-xhdpi\		ic_notification.png	Not Connected	Always
\$(BDS)\bin\Artwork\..	FM_SplashImage_640x4...	Android_Splas...	Debug [Android]	res\drawable-large\		splash_image.png	Not Connected	Always
\$(BDS)\bin\Artwork\..	FM_LauncherIcon_48x4...	Android_Laun...	Debug [Android]	res\drawable-mdpi\		ic_launcher.png	Not Connected	Always
\$(BDS)\bin\Artwork\..	FM_LauncherIcon_36x3...	Android_Laun...	Debug [Android]	res\drawable-ldpi\		ic_launcher.png	Not Connected	Always
\$(BDS)\bin\Artwork\..	FM_LauncherIcon_72x7...	Android_Laun...	Debug [Android]	res\drawable-hdpi\		ic_launcher.png	Not Connected	Always
\$(BDS)\bin\Artwork\..	FM_LauncherIcon_144x...	Android_Laun...	Debug [Android]	res\drawable-xxhdpi\		ic_launcher.png	Not Connected	Always
\$(BDS)\bin\Artwork\..	FM_LauncherIcon_96x9...	Android_Laun...	Debug [Android]	res\drawable-xhdpi\		ic_launcher.png	Not Connected	Always
\$(BDS)\bin\Artwork\..	FM_SplashImage_960x7...	Android_Splas...	Debug [Android]	res\drawable-large\		splash_image.png	Not Connected	Always
\$(BDS)\bin\Artwork\..	FM_SplashImage_470x3...	Android_Splas...	Debug [Android]	res\drawable-normal\		splash_image.png	Not Connected	Always
\$(BDS)\lib\android\..	libnative-activity.so	AndroidLibnat...	Debug [Android]	library\lib\armeabi\	libBassLiveFx.so		Not Connected	Always
\$(BDS)\lib\android\..	libnative-activity.so	AndroidLibnat...	Debug [Android]	library\lib\armeabi-v7a\	libBassLiveFx.so		Not Connected	Always
Output\Android\De...	splash_image_def.xml	AndroidSplash...	Debug [Android]	res\drawable\		splash_image_def.xml	Not Connected	Always
Output\Android\De...	styles-v21.xml	AndroidSplash...	Debug [Android]	res\values-v21\		styles.xml	Not Connected	Always
Output\Android\De...	strings.xml	Android_Strings...	Debug [Android]	res\values\		strings.xml	Not Connected	Always
Output\Android\De...	colors.xml	Android_Colors...	Debug [Android]	res\values\		colors.xml	Not Connected	Always
Output\Android\De...	classes.dex	AndroidClass...	Debug [Android]	classes\		classes.dex	Not Connected	Always
Output\Android\De...	libBassLiveFx.so	ProjectOutput...	Debug [Android]	library\lib\armeabi-v7a\	libBassLiveFx.so		Not Connected	Always
Output\Android\De...	AndroidManifest.xml	ProjectAndroi...	Debug [Android]	\		AndroidManifest.xml	Not Connected	Always

All configurations - Android 32-bit platform								
Local Path	Local Name	Type	Configur...	Platforms	Remote Path	Remote Name	Remote Status	Overwrite

This table shows the deployment status for the 32-bit platform, mirroring the structure of the first table but with different file names and paths.

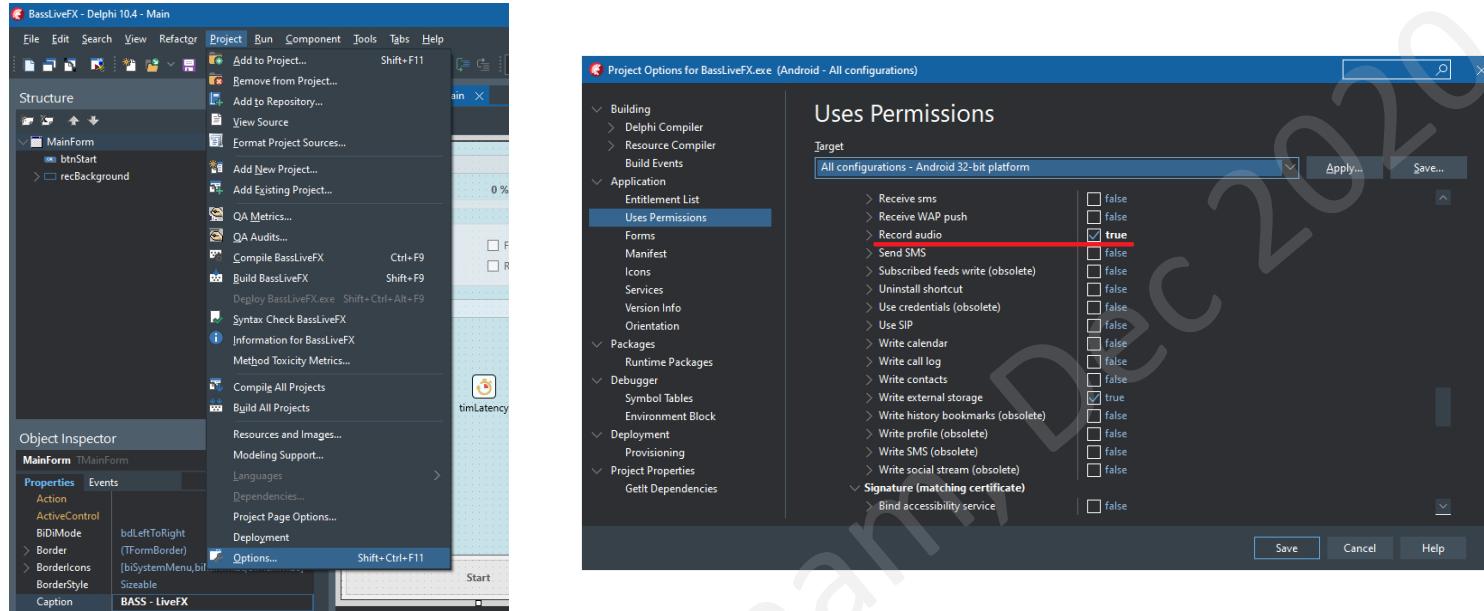
Similar to Mac OS (64) to select the SO file

All configurations - Android 64-bit platform								
Local Path	Local Name	Type	Configur...	Platforms	Remote Path	Remote Name	Remote Status	Overwrite
\$(BDS)\bin\Artwork\..	FM_LauncherIcon_36x3...	Android_Laun...	Debug [Android64]	res\drawable-ldpi\		ic_launcher.png	Not Connected	Always
\$(BDS)\bin\Artwork\..	FM_LauncherIcon_144x...	Android_Laun...	Debug [Android64]	res\drawable-xhdpi\		ic_launcher.png	Not Connected	Always
\$(BDS)\bin\Artwork\..	FM_LauncherIcon_96x9...	Android_Laun...	Debug [Android64]	res\drawable-hdpi\		ic_launcher.png	Not Connected	Always
\$(BDS)\bin\Artwork\..	FM_SplashImage_470x3...	Android_Splas...	Debug [Android64]	res\drawable-normal\		splash_image.png	Not Connected	Always
\$(BDS)\bin\Artwork\..	FM_SplashImage_48x4...	Android_Splas...	Debug [Android64]	res\drawable-mdpi\		ic_launcher.png	Not Connected	Always
\$(BDS)\bin\Artwork\..	FM_SplashImage_42x3...	Android_Splas...	Debug [Android64]	res\drawable-xxhdpi\		ic_launcher.png	Not Connected	Always
\$(BDS)\bin\Artwork\..	FM_NotificationIcon_24...	Android_Notify...	Debug [Android64]	res\drawable-xhdpi\		ic_notification.png	Not Connected	Always
\$(BDS)\bin\Artwork\..	FM_NotificationIcon_48...	Android_Notify...	Debug [Android64]	res\drawable-xxhdpi\		ic_notification.png	Not Connected	Always
\$(BDS)\bin\Artwork\..	FM_NotificationIcon_36...	Android_Notify...	Debug [Android64]	res\drawable-hdpi\		ic_notification.png	Not Connected	Always
\$(BDS)\bin\Artwork\..	FM_NotificationIcon_96...	Android_Notify...	Debug [Android64]	res\drawable-xxhdpi\		ic_notification.png	Not Connected	Always
\$(BDS)\lib\android\..	libnative-activity.so	AndroidLibnat...	Debug [Android64]	library\lib\armeabi\	libBassLiveFx.so		Not Connected	Always
\$(BDS)\lib\android\..	libnative-activity.so	AndroidLibnat...	Debug [Android64]	library\lib\armeabi-v7a\	libBassLiveFx.so		Not Connected	Always
Output\Android\De...	splash_image_def.xml	AndroidSplash...	Debug [Android64]	res\drawable\		splash_image_def.xml	Not Connected	Always
Output\Android\De...	styles-v21.xml	AndroidSplash...	Debug [Android64]	res\values-v21\		styles.xml	Not Connected	Always
Output\Android\De...	strings.xml	Android_Strings...	Debug [Android64]	res\values\		strings.xml	Not Connected	Always
Output\Android\De...	colors.xml	Android_Colors...	Debug [Android64]	res\values\		colors.xml	Not Connected	Always
Output\Android\De...	classes.dex	AndroidClass...	Debug [Android64]	classes\		classes.dex	Not Connected	Always
Output\Android\De...	libBassLiveFx.so	ProjectOutput...	Debug [Android64]	library\lib\armeabi-v7a\	libBassLiveFx.so		Not Connected	Always
Output\Android\De...	AndroidManifest.xml	ProjectAndroi...	Debug [Android64]	\		AndroidManifest.xml	Not Connected	Always

All configurations - Android 64-bit platform								
Local Path	Local Name	Type	Configur...	Platforms	Remote Path	Remote Name	Remote Status	Overwrite

This table shows the deployment status for the 64-bit platform, mirroring the structure of the first table but with different file names and paths.

Specify necessary permissions in Uses Permissions (Example: Record audio):



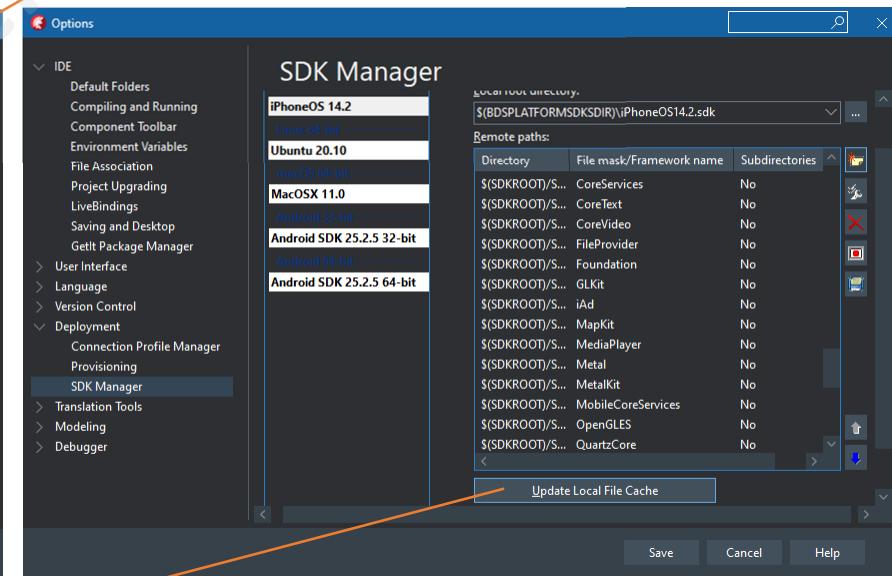
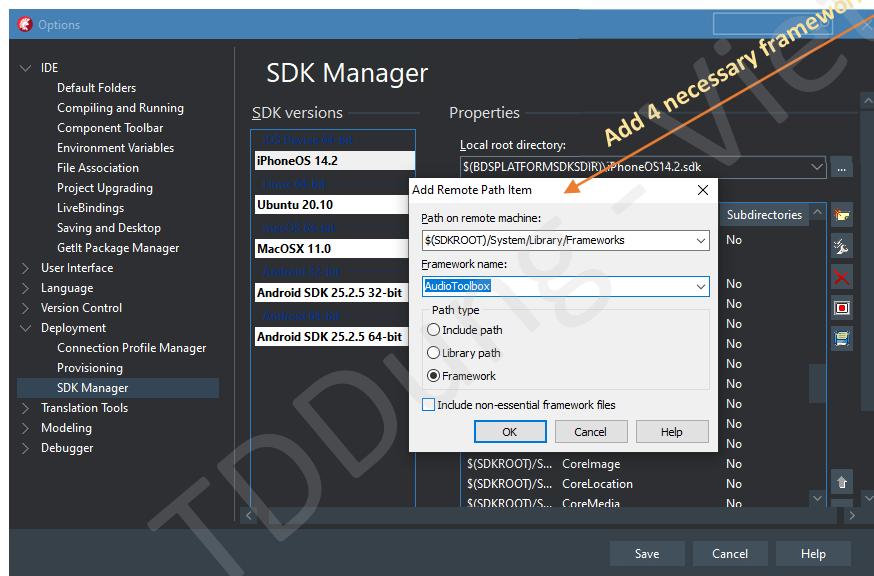
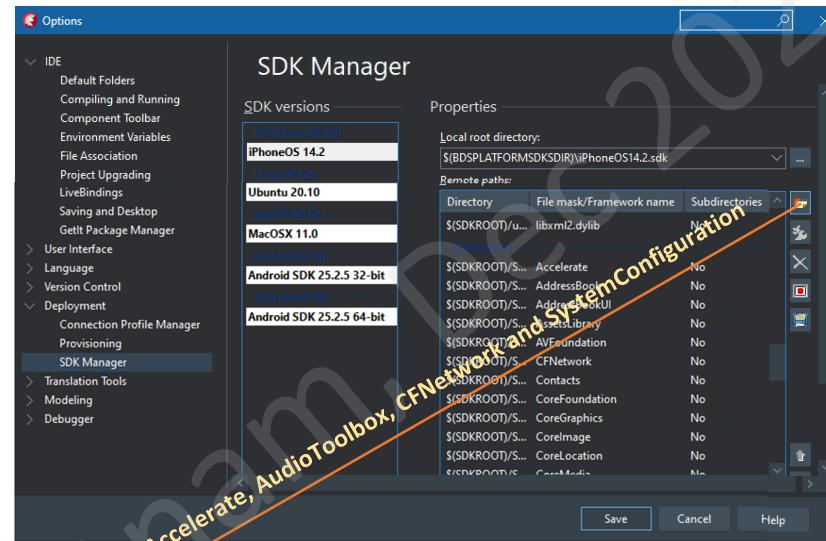
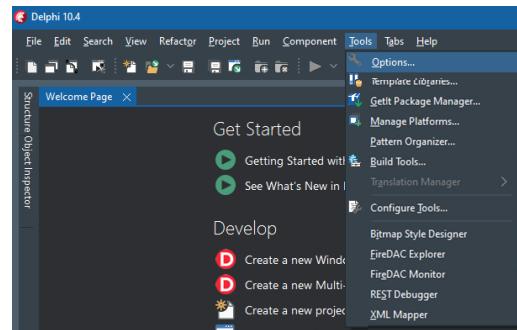
Request user's approval for the specified permissions programmatically in the Delphi's FMX project:

```
if BASS_GetVersion shr 16 <> BASSVERSION then
begin
  TDialogService.ShowMessage('An incorrect version of BASS audio library was loaded');
  Exit;
end;
{IFDEF ANDROID}
if PermissionsService.IsPermissionGranted('android.permission.RECORD_AUDIO') then
  bStart.Enabled:= True
else
  PermissionsService.RequestPermissions(['android.permission.RECORD_AUDIO'],
    procedure(const APermissions: TArray<string>; const AGrantResults: TArray<TPermissionStatus>)
    begin
      if Length(AGrantResults) = 1 then
        case AGrantResults[0] of
          TPermissionStatus.Granted: bStart.Enabled:= True;
          TPermissionStatus.Denied:
            TDialogService.ShowMessage('Cannot record audio without the relevant permission being granted');
          TPermissionStatus.PermanentlyDenied:
            TDialogService.ShowMessage('If you wish to use the audio recording feature of this app,
              + ' please go to app settings and enable the microphone permission');
        end
      else
        TDialogService.ShowMessage('Something went wrong with the permission checking');
    end,
    procedure(const APermissions: TArray<string>; const APostRationaleProc: TProc)
    begin
      // Show an explanation to the user *asynchronously* - don't block this thread waiting for the user's response!
      // After the user sees the explanation, invoke the post-rationale routine to request the permissions
      TDialogService.ShowMessage('We first need to be given permission to record audio with your device',
        procedure(const AResult: TModalResult)
        begin
          APostRationaleProc;
        end);
    end);
{ELSE}
bStart.Enabled:= True;
{ENDIF}
```

iOS (64)

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Getting additional frameworks for iOS's SDK:



Get necessary SDK files from XCode for the 4 added frameworks

Add 4 necessary frameworks: Accelerate, AudioToolbox, CFNetwork and SystemConfiguration

Request linker to add necessary frameworks in Linking (Example: Accelerate, AudioToolbox and CFNetwork):

