

## User Guide

# Zukor interactive applications

This user guide has been created to educate and inform the reader about the Zukor interactive applications with the BioTrace+ V2017A software.

For more information about NeXus, our BioTrace+ software, please visit our website or contact us.

**[www.mindmedia.com](http://www.mindmedia.com)**

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Contents

Introduction..... 3

Installing Zukor screens..... 3

Installing and registering Zukor application(s) ..... 5

Using Zukor applications ..... 7

Changing Feedback Mode ..... 12

## Introduction

The BioTrace+ Zukor screens are designed to be used with Zukor interactive applications. This user guide focuses on the use of the BioTrace+ Zukor screens with NeXus and BioTrace+.

BioTrace+ sends up to 4 channels/signals to Zukor. The following parameters of these channels/signals are sent:

- Channel name
- Data value
- Threshold level
- Direction of training, up or down (reward tag)

The BioTrace+ Zukor screens have been developed for BioTrace+ version 2017A or newer and the following versions of the Zukor applications or newer:

- Zukor's Air Release 1.7, Build 112, 01 AUG 2016
- Zukor's Carnival Release 1.2, Build 68, 26 JAN 2017
- Zukor's Drive Release 1.1, Build 41, 16 AUG 2016
- Zukor's Sports 1 Release 1.5, Build 29, 24 AUG 2016
- Zukor Media Player Release 1.3, Build 90, 27 July 2016

After purchasing a Zukor application, an installer for BioTrace+ Zukor Screens and an installer for the Zukor Application will be provided. First install the Zukor Screens and the Zukor application.

The following screens are included in the BioTrace+ Zukor update:

### *EEG*

- 1x EEG 1 band
- 1x EEG 2 bands
- 1x EEG 3 bands
- 2x EEG 2 bands
- 4x EEG 1 band

### *Temperature*

- Temperature

### *HEG*

- HEG

### *Z-Score*

- Z-Score 2 channels
- Z-Score 4 channels

### *EMG*

- 2x EMG (100-500 Hz)

### *HRV*

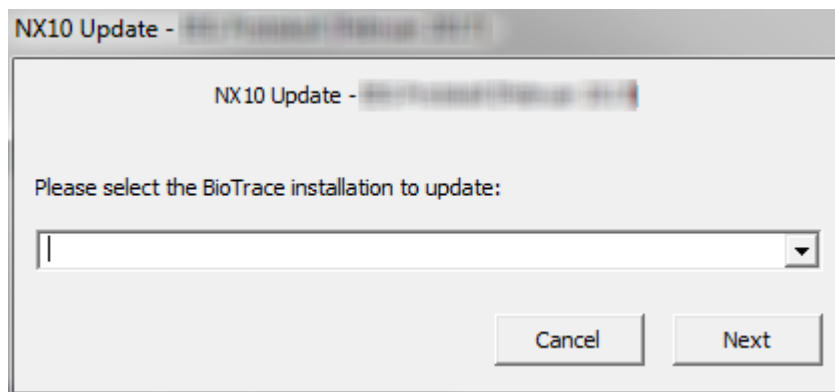
- HRV – Blood Volume Pulse

### *Skin conductance*

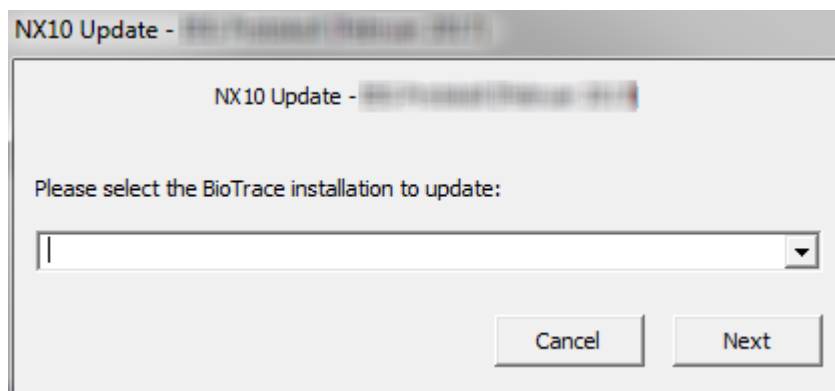
- Skin Conductance

## Installing Zukor screens

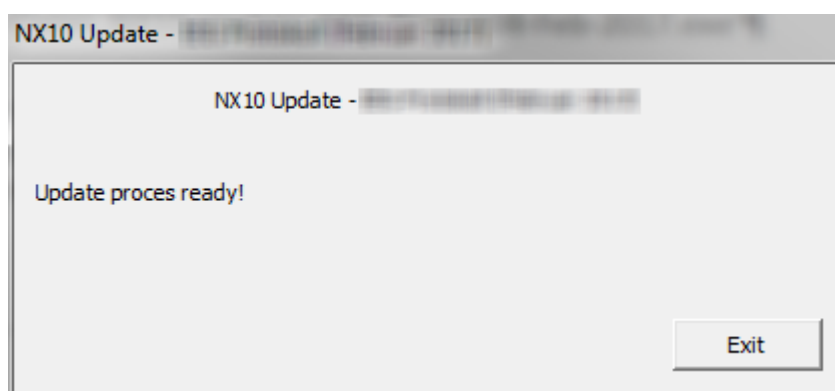
1. Open the file **NX4/10/32 Update– Zukor.exe** (the software will now search for BioTrace+ installs on the computer).



2. Select the BioTrace+ directory where the protocol needs to be installed (this step is only necessary when there are multiple versions of BioTrace+ installed) and click **Next**.



3. Click **Exit** once installation has finished.

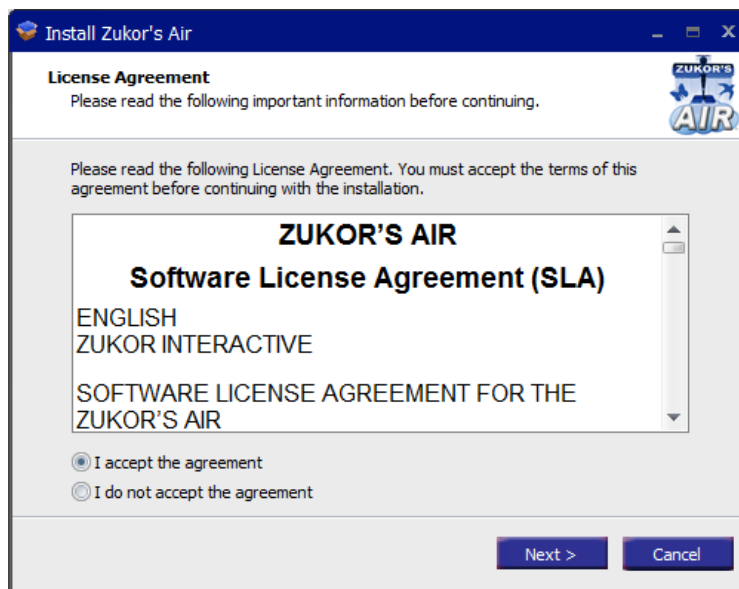


4. The Zukor screens can be accessed through the screen browser in BioTrace+. The screens are located under **My screens > Zukor**.

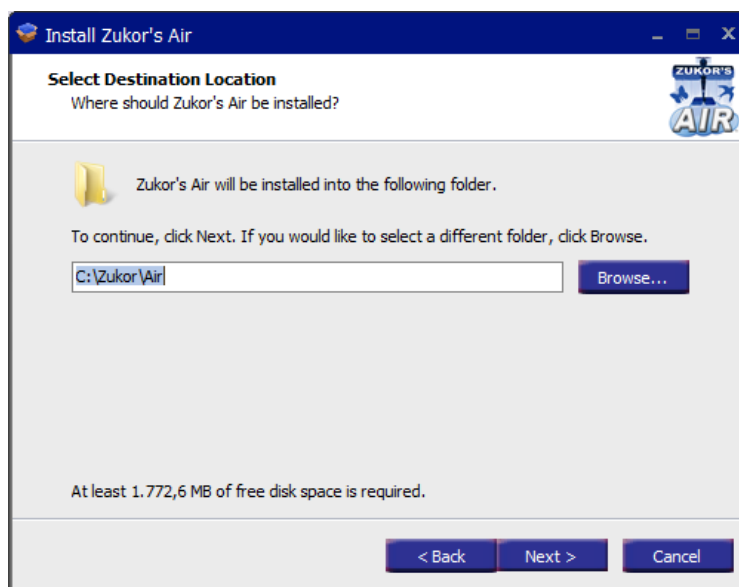
## Installing and registering Zukor application(s)

*For this example Zukor Air is used, the background image of the installer and Zukor license screen can differ for each application.*

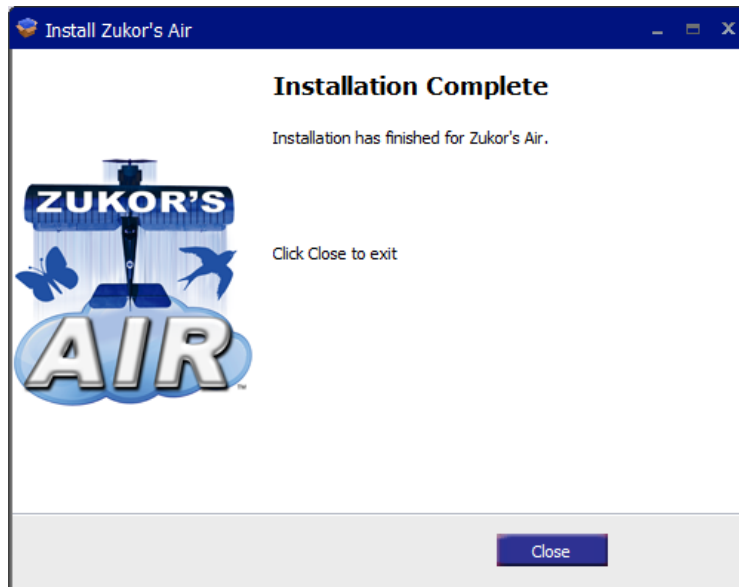
1. Download the Zukor application and open the installer by double clicking the executable.
2. Accept the license agreement and press **Next >**.



3. Select the destination location (or leave it as default) and press **Next >**.



4. Click **Close** once the installation has finished.



5. Open the application via the quick launch icon on the desktop and start the installed Zukor application to open the License Key screen.

6. Fill out the top part of the License Key screen and click **Request key** to send the computer ID to Zukor. Within 24 hours a license will be send back by email.

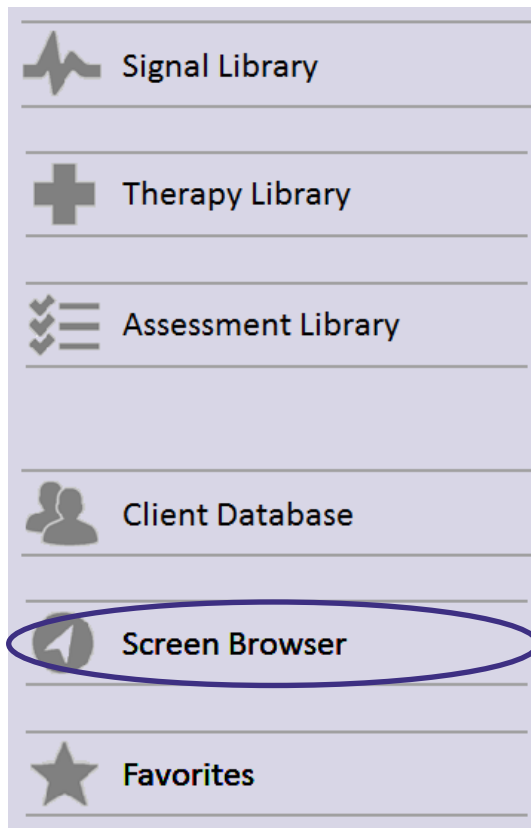
*If the computer is not connected to the internet, it's also possible to activate the application offline. Send an email [licensekey@zukor.com](mailto:licensekey@zukor.com) including the following:*

- Clinician name and e-mail address
- Requesters name and e-mail address (if the requester is different than the clinician)
- Purchased from whom
- (Optional) comments
- Request key/computer ID

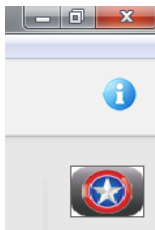
7. Copy and paste the request key from the mail and click **Apply Key**.

## Using Zukor applications

1. Open a BioTrace+ Zukor screen to automatically start the Zukor launcher. The BioTrace Zukor screens are located in the **Screen browser** under **My screens > Zukor**.



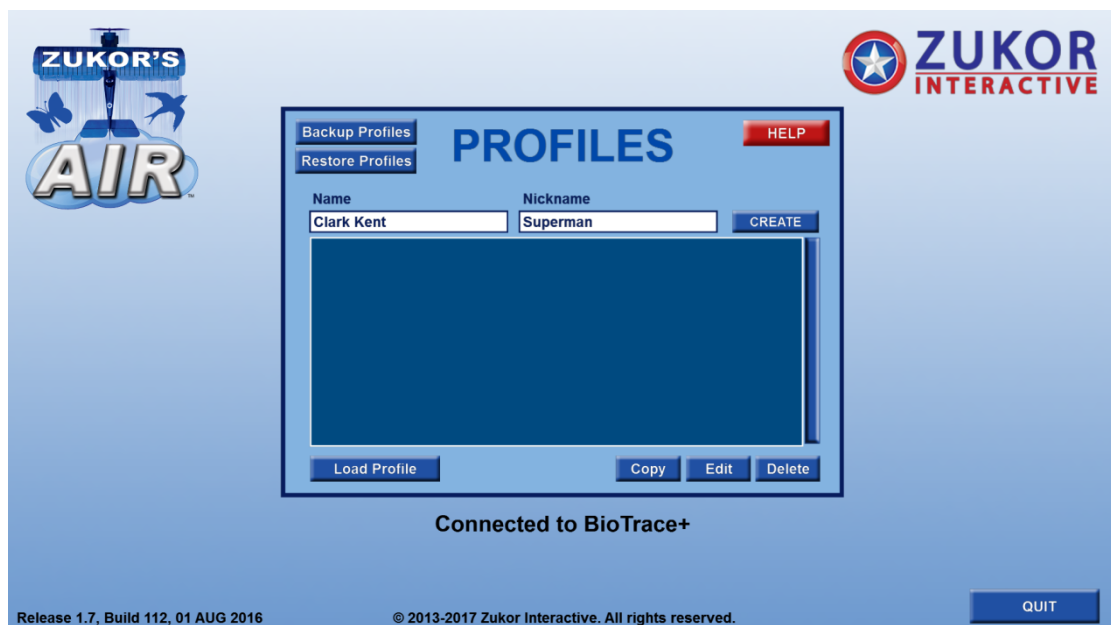
*Zukor screens can be recognized by the Zukor icon in the top right corner of the screen.*



2. The Zukor Launcher will now open. Select the Zukor application.

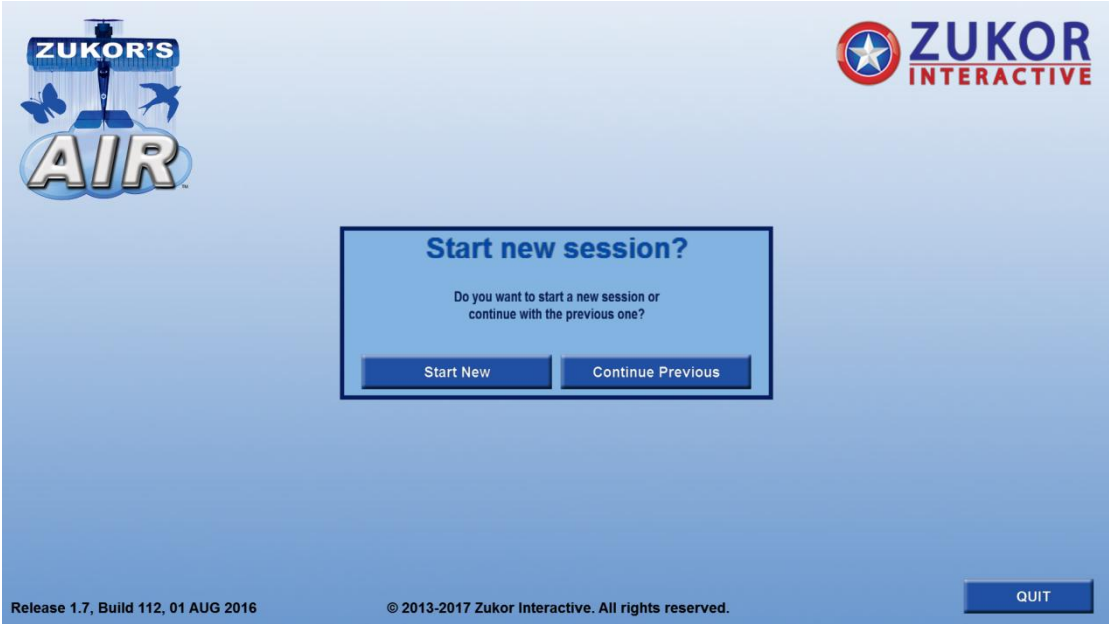


3. Create a profile or select a previously created profile. Click **Help** for more information on how to create a new profile.

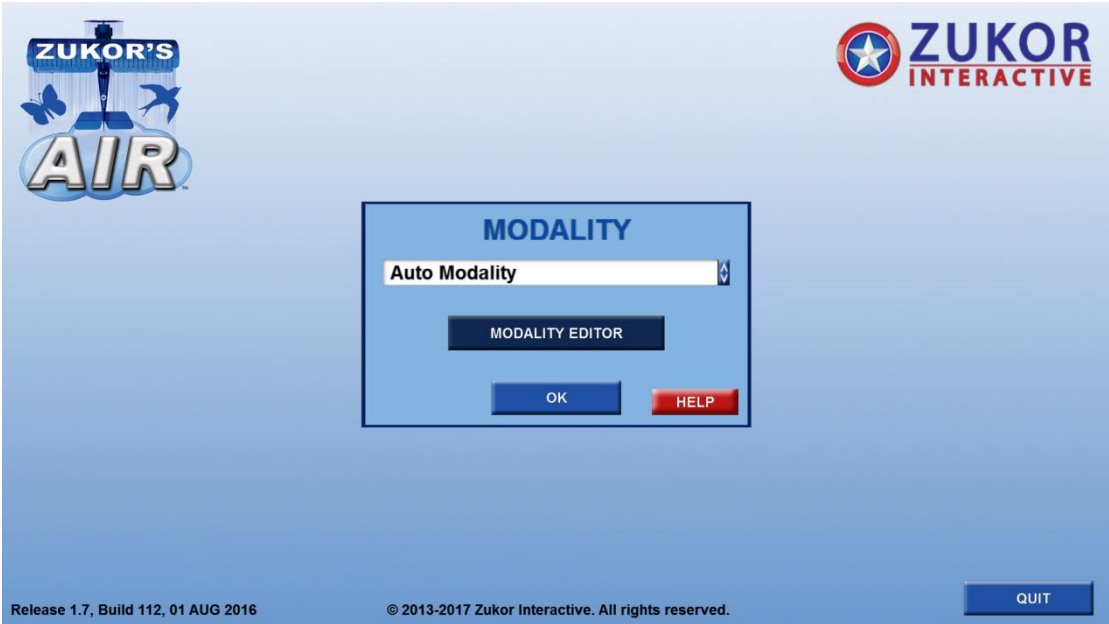




4. Start a new session or continue a previous session.



5. Select **Auto modality** and press **OK**.



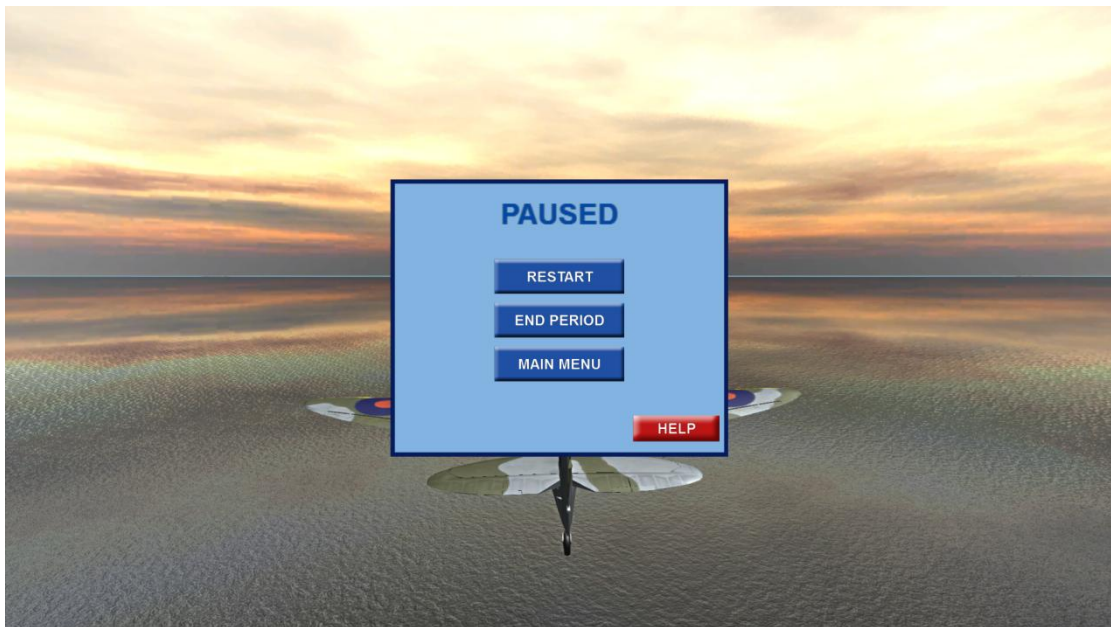
6. Click **Ready** to start the application. Click **Help** for more information on the different options.



7. Run the period by starting the recording in BioTrace+.



8. Stop the period by stopping the recording or by clicking the Zukor application, pressing the spacebar and selecting **End period**.



9. Press 'Quit' to exit the application or 'Next period' to start a new training.

**SCORES**

Superman

GRAND TOTAL

SESSION 2

First Prev Next Last

All Time Session	High	<input type="text" value="1,411"/>	Average	<input type="text" value="1,227"/>	Low	<input type="text" value="1,044"/>
All Time Period	High	<input type="text" value="1,059"/>	Average	<input type="text" value="613"/>	Low	<input type="text" value="0"/>

PERIODS

TOTAL POINTS	<input type="text" value="1,044"/>
Bonus Points	<input type="text" value="300"/>
Training Points	<input type="text" value="744"/>
Period	<input type="text" value="1"/>

**TOP PERIOD SCORES**

1. Superman	<input type="text" value="1,059"/>
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**TOP SESSION SCORES**

1. Superman	<input type="text" value="1,411"/>
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*To open a different application or in case Zukor has been closed by accident, the application can be started again by opening the Zukor launcher shortcut on the desktop.*

## Changing Feedback Mode

By default, the Accuracy is set to Proportional Mode. This means that collectively for all events the amount each event is meeting or not meeting the criteria is factored into the Accuracy.

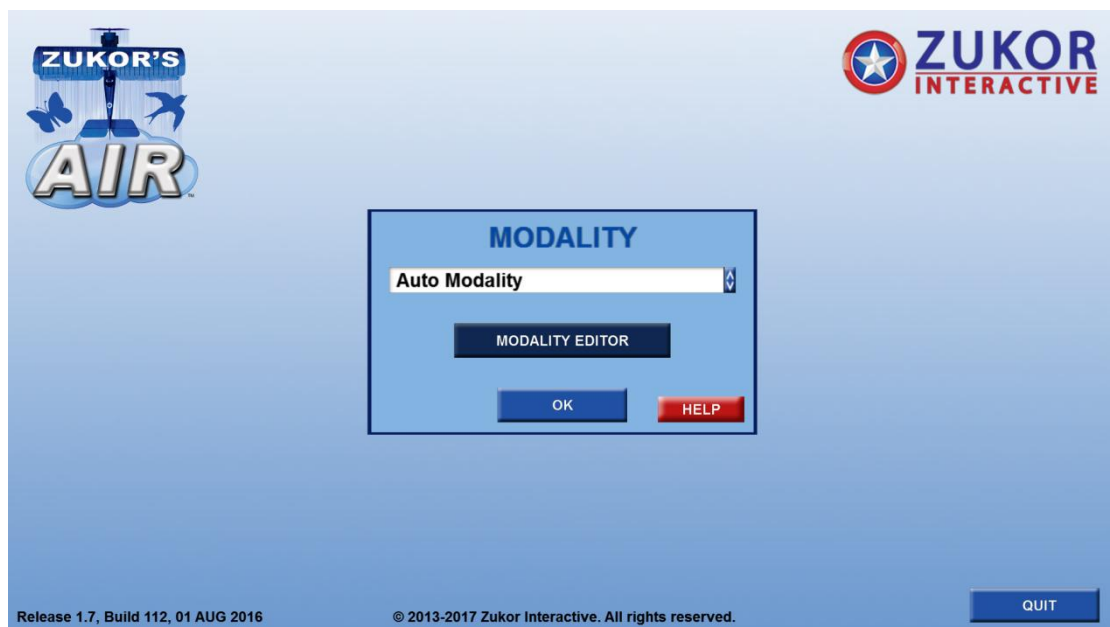
In BioTrace+ the feedback mode is usually set to discrete mode. The feedback mode settings in the Zukor application can be changed so it lines up with the way BioTrace+ usually handles the feedback mode.

To do so the feedback mode has to be changed to discrete, Discrete mode has 2 option to choose from:

- Per event, this means that if there are three events and one event is true the gameplay accuracy will be 33%. If two events are true then it will be 66% accuracy and if all three events are true then the gameplay accuracy will be 100%.
- All events, this means that all events have to be true and the result would be 100% Accuracy.

To change the feedback mode take the following steps:

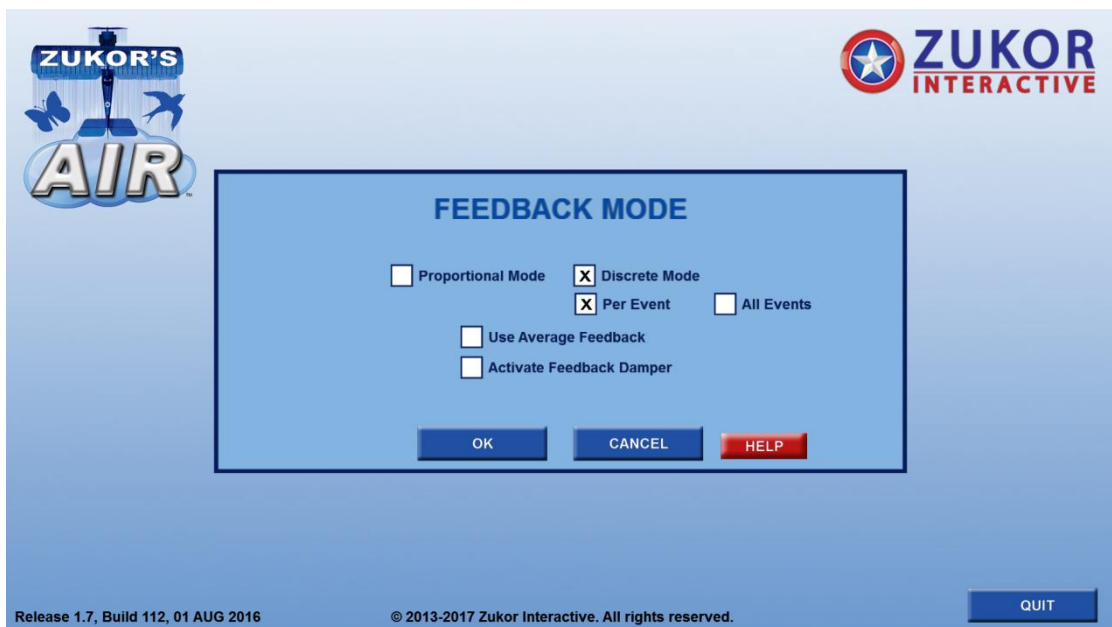
1. Open the modality screen by starting a new session or load a previous session (as described in Using Zukor applications), select **Auto modality** and press **Modality editor**.



2. Click **Feedback mode**.



3. Change the setting from **Proportional mode** to **Discrete mode** and press **OK**.



4. Return to the Modality screen and open the main menu by pressing **OK > X (close) > OK**.