

## Sonoran CAD Database Sync Tutorial

Sonoran CAD Database Sync allows you to pull characters, licenses and vehicle registrations directly from your in-game database to your CAD. Database Sync is designed to work with almost any gamemode or framework.

Database Sync currently requires your community to provide access to a standard SQL database where licenses and vehicle registrations are marked with a unique civilian character ID.

*NOTE: Because Sonoran CAD's Database Sync functionality creates a separate SQL connection based upon your specified credentials and mapping, search functionality speeds in your CAD will be increased. However, typical search speeds should not exceed more than 1-2 seconds.*



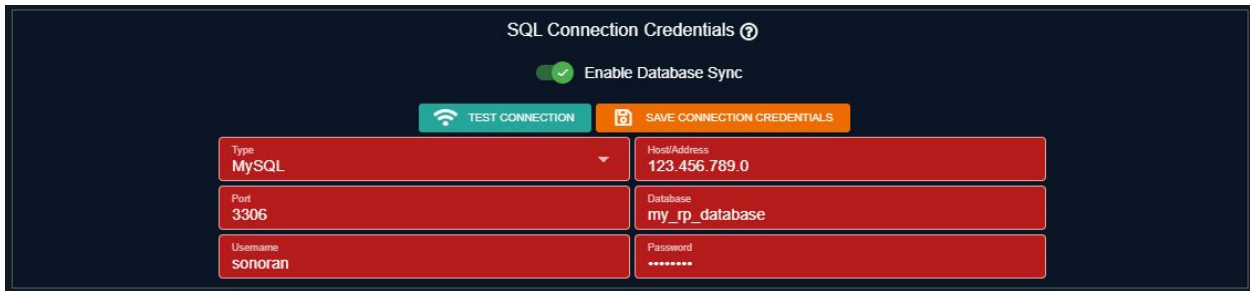
While the guide below may seem complicated, you are simply specifying the table and column names to pull data from.

**Mapping Table Key:**

RED	Required Mapping Field
BLUE	Optional Mapping Field

**1.1 Connection Credentials:**

**SECURITY NOTICE:**  
 It is **HIGHLY** recommended that you create a separate SQL user account with **READ ONLY** permissions. Sonoran CAD only needs **READ** access in your database.



In order for Sonoran CAD to connect to your SQL database, connection credentials must be configured properly. This section specifies the SQL connection string information.

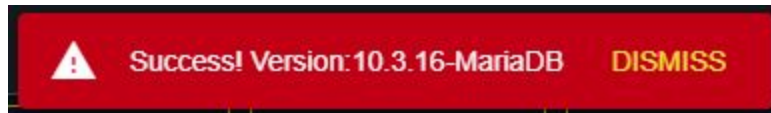
1. Toggle the “Enable Database Sync”
2. Enter the **required** fields below.

All of the following fields are **REQUIRED** in order to create a successful connection.

Field	Description
Type	This is the type of SQL database your server is using (MySQL, PostgreSQL, etc.)
Host/Address	This is the IP address or domain address to your SQL database.
Port	This is the port your database is accessible from. Typically, the default port for MySQL is 3306.
Database	This is the database or schema name that contains your community’s

	character, license and vehicle registration tables.
Username	This is the SQL account username.
Password	This is the password for the SQL account.

- Once the **required** SQL connection fields have been specified, select the “Test Connection” button. This will query your database for the version. If you see an alert similar to the following, your connection is successful.



- If the test was successful, press “Save Connection Credentials” and continue.

## 1.2 Character Mapping:

*NOTE: Sonoran CAD requires character mapping for characters, licenses and vehicle registrations.*

- Toggle the “Enable Character Mapping”
- Enter the **required** fields below. Leave any fields that you do not have blank.

Field	Description
CHARACTER TABLE	This is the name of the table that contains your characters.
CHARACTER ID	This is name of the column containing the unique ID of your character. <b>IMPORTANT:</b> This ID is used to link licenses and vehicle registrations to a character. Typically this is a Steam ID, but can be any unique character identifier.
FIRST NAME	This is the name of the column containing the character’s first name.
LAST NAME	This is the name of the column containing the character’s last name.
DOB	This is the name of the column containing the character’s date of birth.
AGE	This is the name of the column containing the character’s age.
SEX	This is the name of the column containing the character’s sex.

ADDRESS	This is the name of the column containing the character's address.
ZIP CODE	This is the name of the column containing the character's ZIP code.
OCCUPATION	This is the name of the column containing the character's occupation/job.
HEIGHT	This is the name of the column containing the character's height.
WEIGHT	This is the name of the column containing the character's weight.
SKIN COLOR	This is the name of the column containing the character's skin color.
HAIR COLOR	This is the name of the column containing the character's hair color.
EYE COLOR	This is the name of the column containing the character's eye color.
IMAGE URL	This is the name of the column containing a URL to the character's image.

**Below is an example of a mapping from a character table:**

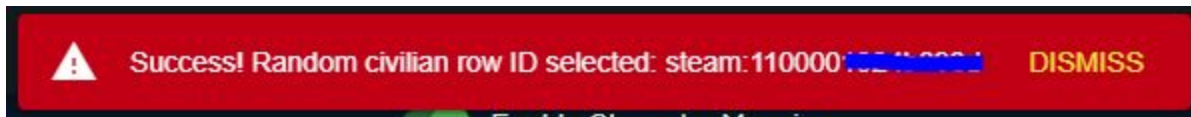
Table Name: characters

123 id	ABC identifier	ABC firstname	ABC lastname	ABC dateofbirth	ABC sex	ABC height
43	steam:11000000000000000	Michael	Scaramucci	10-20-1986	m	140

<div style="background-color: #e85c3d; color: white; padding: 5px; border: 1px solid black;"> <span style="font-size: 1.2em; font-weight: bold;">?</span> Character Database Table <b>characters</b> </div>	<div style="background-color: #e85c3d; color: white; padding: 5px; border: 1px solid black;"> <span style="font-size: 1.2em; font-weight: bold;">?</span> Character ID <b>identifier</b> </div>
<div style="background-color: #e85c3d; color: white; padding: 5px; border: 1px solid black;"> <span style="font-size: 1.2em; font-weight: bold;">?</span> First Name <b>firstname</b> </div>	<div style="background-color: #e85c3d; color: white; padding: 5px; border: 1px solid black;"> <span style="font-size: 1.2em; font-weight: bold;">?</span> Last Name <b>lastname</b> </div>
<div style="background-color: #2c3e50; color: white; padding: 5px; border: 1px solid black;"> <span style="font-size: 1.2em; font-weight: bold;">?</span> DOB <b>dateofbirth</b> </div>	<div style="background-color: #2c3e50; color: white; padding: 5px; border: 1px solid black;"> <span style="font-size: 1.2em; font-weight: bold;">?</span> Age         </div>
<div style="background-color: #2c3e50; color: white; padding: 5px; border: 1px solid black;"> <span style="font-size: 1.2em; font-weight: bold;">?</span> Sex <b>sex</b> </div>	<div style="background-color: #2c3e50; color: white; padding: 5px; border: 1px solid black;"> <span style="font-size: 1.2em; font-weight: bold;">?</span> Residence/Address         </div>
<div style="background-color: #2c3e50; color: white; padding: 5px; border: 1px solid black;"> <span style="font-size: 1.2em; font-weight: bold;">?</span> ZIP         </div>	<div style="background-color: #2c3e50; color: white; padding: 5px; border: 1px solid black;"> <span style="font-size: 1.2em; font-weight: bold;">?</span> Occupation         </div>
<div style="background-color: #2c3e50; color: white; padding: 5px; border: 1px solid black;"> <span style="font-size: 1.2em; font-weight: bold;">?</span> Height <b>height</b> </div>	<div style="background-color: #2c3e50; color: white; padding: 5px; border: 1px solid black;"> <span style="font-size: 1.2em; font-weight: bold;">?</span> Weight         </div>
<div style="background-color: #2c3e50; color: white; padding: 5px; border: 1px solid black;"> <span style="font-size: 1.2em; font-weight: bold;">?</span> Skin Color         </div>	<div style="background-color: #2c3e50; color: white; padding: 5px; border: 1px solid black;"> <span style="font-size: 1.2em; font-weight: bold;">?</span> Hair Color         </div>
<div style="background-color: #2c3e50; color: white; padding: 5px; border: 1px solid black;"> <span style="font-size: 1.2em; font-weight: bold;">?</span> Eye Color         </div>	<div style="background-color: #2c3e50; color: white; padding: 5px; border: 1px solid black;"> <span style="font-size: 1.2em; font-weight: bold;">?</span> Image         </div>

Note: As shown in the figures above, the table name and column names are directly entered into the corresponding fields.

7. Once the **required** character mapping fields have been specified, select the “Test Character Mapping” button. This will query your database for one character row with all of the columns you have specified. If you see an alert similar to the following, your mapping is valid.



8. If the test was successful, press “Save Character Mapping” and continue.

### **1.3 License Mapping:**

**NOTE:** Sonoran CAD requires valid character mapping in order to search and pull license information. The owner ID on the license record is used to map the license to a character.

9. Toggle the “Enable License Mapping”
10. Enter the **required** fields below. Leave any fields that you do not have blank.

Field	Description
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LICENSE TABLE	This is the name of the table that contains your licenses.
Primary Key	This is the name of your licensing table's primary key/unique index.
OWNER ID	This is name of the column containing the unique ID of the character that owns this license.  <b>IMPORTANT:</b> This ID is the same character ID specified in the character mapping above. Typically this is a Steam ID, but can be any unique character identifier.
Type	This is the name of the column containing the license type. This could contain values like "DRIVERS", "CDL", "Firearm", etc.
Status	This is the name of the column containing the license status. This could contain values like "ACTIVE", "SUSPENDED", "REVOKED", etc.
Expiration	This is the name of the column containing the license expiration date.

Below is an example of a mapping from a license table:

Table Name:

id	type	owner
93	weapon	Char2:1100000000000000
94	dmv	steam:1100000000000000
95	drive	steam:1100000000000000

License Mapping ?

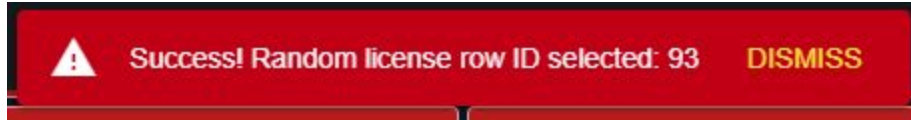
Enable License Mapping

<span>?</span> License Database Table user_licenses	<span>?</span> Primary Key / Unique ID id
<span>?</span> License Owner (Maps to Character) owner	<span>?</span> Type type
<span>?</span> Status	<span>?</span> Expiration

Note: As shown in the figures above, the table name and column names are directly entered into the corresponding fields.

11. Once the **required** license mapping fields have been specified, select the "Test License Mapping" button. This will query your database for one license row with all of the

columns you have specified. If you see an alert similar to the following, your mapping is valid.



12. If the test was successful, press “Save License Mapping” and continue.

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### 1.4 Vehicle Registration Mapping:

*NOTE: Sonoran CAD requires valid character mapping in order to search and pull vehicle registration information. The owner ID on the vehicle registration record is used to map the license to a character.*

13. Toggle the “Enable Vehicle Mapping”

14. Enter the **required** fields below. Leave any fields that you do not have blank.

Field	Description
Vehicle Table	This is the name of the table that contains your vehicle registrations.
Primary Key	This is the name of your vehicle registration table’s primary key/unique index.
Owner ID	This is name of the column containing the unique ID of the character that owns this vehicle registration.  <b>IMPORTANT:</b> This ID is the same character ID specified in the character mapping above. Typically this is a Steam ID, but can be any unique character identifier.
Plate	This is the name of the column containing the license type. This could contain values like “DRIVERS”, “CDL”, “Firearm”, etc.
Type	This is the name of the column containing the vehicle type. This could contain values like “CAR”, “TRUCK”, “SUV”, etc.
Make	This is the name of the column containing the vehicle make.
Model	This is the name of the column containing the vehicle model.
Color	This is the name of the column containing the vehicle color.
Year	This is the name of the column containing the vehicle year.

Expiration	This is the name of the column containing the vehicle registration expiration date.
Status	This is the name of the column containing the license status. This could contain values like “ACTIVE”, “SUSPENDED”, “REVOKED”, etc.

Below is an example of a mapping from a vehicle registration table:

Table Name:

ABC owner	ABC plate	ABC modelname	ABC type
steam:110000110000110000	89SPI443	{"mc zombieb	car
steam:110000110000110000	SKA092	{"wh blista	car

### Vehicle Registration Mapping ?

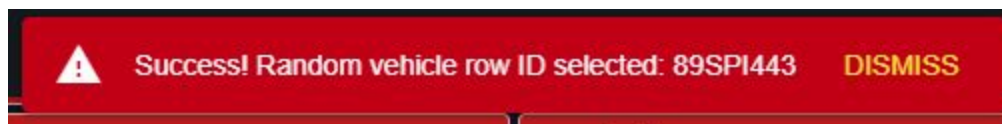
Enable Vehicle Mapping

TEST VEHICLE MAPPING
SAVE VEHICLE MAPPING

<span style="font-size: 20px; color: white;">?</span> License Database Table <b>owned_vehicles</b>	<span style="font-size: 20px; color: white;">?</span> Primary Key / Unique ID <b>plate</b>
<span style="font-size: 20px; color: white;">?</span> License Owner (Maps to Character) <b>owner</b>	<span style="font-size: 20px; color: white;">?</span> Plate <b>plate</b>
<span style="font-size: 20px; color: white;">?</span> Vehicle Type <b>type</b>	<span style="font-size: 20px; color: white;">?</span> Make
<span style="font-size: 20px; color: white;">?</span> Model <b>modelName</b>	<span style="font-size: 20px; color: white;">?</span> Color
<span style="font-size: 20px; color: white;">?</span> Year	<span style="font-size: 20px; color: white;">?</span> Expiration
<span style="font-size: 20px; color: white;">?</span> Status	

Note: As shown in the figures above, the table name and column names are directly entered into the corresponding fields.

- Once the **required** vehicle registration mapping fields have been specified, select the “Test Vehicle Mapping” button. This will query your database for one vehicle registration record with all of the columns specified. If you see an alert similar to the following, your mapping is valid.



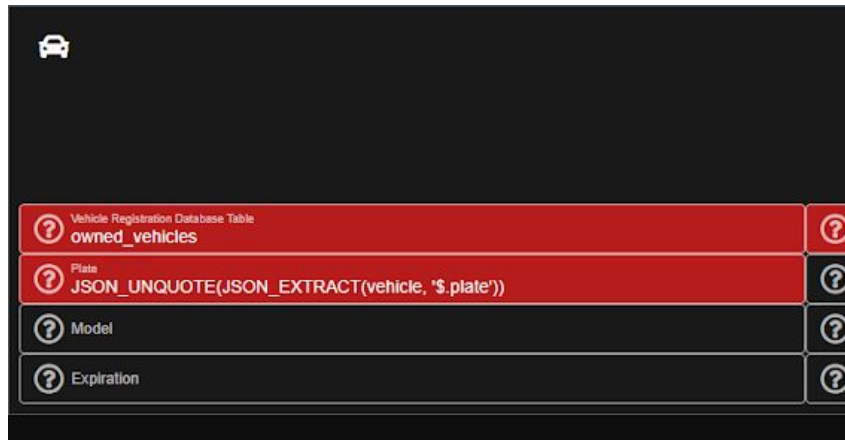
- If the test was successful, press “Save Vehicle Mapping” and continue.



## 1.5 Advanced - JSON:

Some communities may store values in a JSON column. The following example shows the syntax to pull the 'plate' key value from a JSON column.

```
JSON_UNQUOTE(JSON_EXTRACT(vehicle, '$.plate'))
```



This will pull the 'plate' value from the JSON string in the 'vehicle' column.

id	vehicle	owner
18,640	{"plate": "16500A05", "xenonColor": 255, "modLivery": -1, "modPlateHolder": -1, "modTrimA": -1, "modVanityPlate": -1, "r	steam:11000
18,635	{"modEngine": -1, "modExhaust": -1, "modArmor": -1, "modLivery": -1, "interiorColor": 0, "xenonColor": 255, "color2": 0, "m	steam:11000

## 1.6 Completion:

Congratulations, you have now successfully enabled Sonoran CAD's Database Sync for your community! You may now test it out by searching for a character name or license plate in the police, dispatch, civilian or DMV pages.