Enhance Your Escape Room Experience with Simulated Phone Connections



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## Making phone ring manually (manual call)

Manual call is an option to call to the connected phone without the need for the user to dial any number.

This is useful for sending a prerecorded message to the players or even (when a microphone is connected to line input) give a message from the game master room.

To trigger a manual call you can press the B button for 3 seconds.

### Calling and hearing prerecorded messages

To be able to hear a prerecorded message when calling a number we need to first check a few things:

- 1. We need to record our prerecorded audio file in MP3 format into the SD audio card.
- 2. We need to set number to call and the duration of the audio file in the settings website of the controller.
- 3. We need to call the number on the phone and wait for the audio to trigger.

To check points 1 and 2 please refer to the "audio and phone number configuration" section.

### Enter configuration mode and connect to the service website

#### Step 1 – Connect phone board to your laptop or android/iphone via wifi

First remove the power of the board by disconnecting the USB.

We will need to **start up** the board (by connecting the power USB cable) **while pressing and holding the 2 buttons** of the board for about 10 seconds.

Now after a 10 seconds aprox. you can release the pressed buttons. We are now in config mode.

Now you can see a new **WIFI SSID** access point available, and connect to it. The password of this connection is the same as the name of the SSID



#### Example:

SSID: RG\_Phone00E03B3A

#### Password: RG\_Phone00E03B3A

In **config mode** the board creates a WIFI access point with a web server that **you can connect to** and configure different aspects of the game like phone numbers, the duration of the audio files, upload new firmware, upload new file system.

#### *Step 2 – Open browser and open configuration website of the game*

Once connected to the wifi access point we can go ahead and browse the configuration page by loading the address in our explorer <u>http://192.168.5.1</u>



In here we can access all the different configuration options and parameters

HINT: in some android phones a message will appear telling you that there is no connection to the internet and that the system would like to try to reconnect to another WIFI point with internet access. Please tell it to

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cancel/abort. Some of the models tried you can not access the configuration website until you have selected cancel/abort in this pop up message.

## Audio and phone numbers configuration

#### Configuring phone numbers and audio duration

Once connected via WIFI completed steps 1 and 2 of section "entering configuration mode" we can continue by entering menu "Config" in the configuration website (<u>http://192.168.5.1</u>)

Volume: 30	0 to 30 (defa	ult 30)				
9 digits max for the nu	Phone Agenda nbers and 9999 seconds max fo	r the du	uration			
Phone Number ID 01:	- Duration audio 01	8				
Phone Number ID 02:	- Duration audio 02	-1				
Phone Number ID 03:	- Duration audio 03	-1				
Phone Number ID 04:	- Duration audio 04	-1				
Phone Number ID 05:	- Duration audio 05	-1				
Phone Number ID 06:	- Duration audio 06	-1				
Phone Number ID 07:	- Duration audio 07	-1				
Phone Number ID 08:	- Duration audio 08	-1				
Phone Number ID 09:	- Duration audio 09	-1				
Phone Number ID 10:	- Duration audio 10	-1				

In this page we can set:

- volume of the audio
- Phone numbers and duration of audio responses
- Duration of the audio response for the manual call

We can follow checking the audio files inside the SD card by understanding the audio folder structure and where to load our prerecorded audio files following next sections. Audio folder structure in SD card

Pin to Quick Copy Paste Copy path Clipboard	Move to * Copy to * Copy to * Copy to *	New folder New	Properties • Open • Open • Open	Select all Select none Invert selection Select	×
$\leftarrow \rightarrow \checkmark \uparrow$ $\blacksquare$ « Jocs propis » Teleph	one project > Audio > 2023_06_	21	ٽ ~		_21
Name	Date modified Type				
01	21/06/2023 08:36 File f	older			
02	21/06/2023 08:36 File f	older			
Order Wav files.txt	21/06/2023 08:36 Text	Document	Select a	file to preview.	
3 items		2	•	E	

Normal SD audio folder structure contains two folder "01" and "02" and a files .txt that contains help.

In folder "02" we will upload our audio files following the naming described in following sections

#### Audio folder 01

SD audio folder 01 contains audio files necessary to mimic the functions of the phone line. This files can be changed according different countries. All files must start with 3 digit number. Numbers are hardcoded and follow specific functions in the controller.

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Image: Pin to Quick access     Image: Pin to Quick Copy     Image: Pin to Quick Copy     Image: Pin to Quick Copy       Pin to Quick Copy     Copy     Paste     Paste	Move Copy to * Copy	e New folder	Properties	Select all Select none Invert selection
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← → × ↑   ✓ ✓ Jocs propis → Telepl	none project > Audio > 2023_06	5_21 → 01	5 V	, ○ Search 01
Name	Date modified Typ	e		
🔔 001 tone line.mp3	15/02/2020 13:29 MF	3 Audio File (V		
🛓 002 tone calling.mp3	15/02/2020 13:29 MF	3 Audio File (V		
🛓 003 tone line busy.mp3	15/02/2020 13:28 MF	3 Audio File (V		
📤 004 tone number not correct.mp3	15/02/2020 13:29 MF	3 Audio File (V	Select a	file to preview.
📤 005 tone receiver not available.mp3	19/08/2020 11:01 MF	3 Audio File (V		
🔔 006 modem.mp3	15/02/2020 13:28 MF	3 Audio File (V		
6 items		,		

#### Audio folder 02

There are 10 phone numbers that can be set to play an audio file when called upon. This numbers will play audio files in the SD card under the folder named 02. All files must start with 3 digit number, and numeration will correlate with the configuration page where we will set the number that will be assign to together with the duration of the audio file. Audio files should be named as follow:

```
Inside folder 02 of SD card (list all call IDs)
```

.....

- 001.mp3 (call ID 1)
- 002.mp3 (call ID 2)
- 003.mp3 (call ID 3)

```
004.mp3 - (call ID 4)
```

•••

Add you mp3 calls here (10 max)

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The audio file for the manual call (when pressing button B) will be named as "011.mp3"

A description of the audio file can be added after the 3 digit numeration as shown in the picture.

File       Home       Share       View       Image: Composition of the state of t
Image: Copy Paste       Im
Clipboard Organize New Open Select
$\leftarrow \rightarrow \checkmark \uparrow$ Jocs propis > Telephone project > Audio > 2023_06_21 > 02 $\checkmark \circlearrowright$ Search 02
Name Date modified Type
🛓 001 voicemail_sp_01.mp3 19/08/2020 11:01 MP3 Audio File (V
📥 002 voicemail_en_02.mp3 21/06/2023 08:19 MP3 Audio File (V
📥 003 voicemail_en_03.mp3 21/06/2023 08:19 MP3 Audio File (V
🛓 011 manual_call_kids_police_station.mp3 21/06/2023 08:28 MP3 Audio File (V Select a file to preview.
4 items

Very important is the fact that the <u>duration</u> of the audio file MUST be set in settings!! otherwise the call will not end and the finish call tone will not be played. That's not a big problem as when the player hangs the phone everything will go back to normal, but it adds a layer of reality to the game that helps the player immerse into the game.

#### Troubleshooting – Audio not playing

If audio fails to play or you are experiencing problem please check that the USB power supply can deliver at least 2A of current at a steady 5V. It is a known issue that weak power supplies will cause problems playing audios.

#### Troubleshooting – Audio weak / inaudible or too loud

Some phones will have and old speaker and the audio might be too low or too high. Each phone will vary. In order to achieve best experience the MP3 audio files should be at a high volume (without clipping) and if the

volume where to be too loud you can always lower the volume either by editing the audio itself or by setting a lower volume in  $\rightarrow$  / configuration mode / settings / volume

### Update firmware or file system

Once completed steps 1 and 2 (entering configuration mode) we can continue by entering menu "Update" in the configuration website (<u>http://192.168.5.1</u>) in our explorer.



Select desired update by choosing Firmware or File system.

Firmware will update the code of the game.

File system will update all related files of the server (including configuration). ALL PREVIOUS CONFIGURATION WILL BE DELETED!

ANY of this options will NOT affect audio files as they are kept separate in an SD card.

Choose desired update and browse for the update file. Update files are usually:

\*.ino.nodemcu.bin for firmware Updates

\*.spiffs.bin for file system updates

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F Home Share Home Share Pin to Quick Copy Paste access Clipboard	View View Cut Copy path Paste shortcut	Copy to Organize	ename New folder Net	Properti W	Edit es History Open	Select all Select none Invert selection Select	×
Name	Date	modified	Type	Size	V U	ja Search tervz	
telV2.ino.nodemcu.bin telV2.spiffs.bin	20/0	6/2023 15:40 6/2023 15:08	BIN File BIN File		Sele	ct a file to preview.	
< 2 items				>			

Once selected you can update and the process will start.

Once updated one or both update modes a **restart will be needed** (power cycle) and if <u>file system</u> has been updated, the configuration (phone numbers and audio duration) will have been deleted as well and will require to be set again.



Figure 1: Picture of actual device