Release Notes

v2.2.14

NEW FUNCTIONS

1. New objects

3D objects related to the Doll Festival or "Hinamatsuri" such as "Byobu" (or folding screen), "Bonbori" (paper lamp), and so on.

FIXES

Minor bug fixes

v2.2.13

FIXES

Fixed a bug that a program created in the lab was not saved.

v2.2.12

NEW FUNCTIONS

1. New objects

- 3D characters such as knights, soldiers and monsters have been added.
- 2D objects were also added. More types of buttons and gauges, character icons, and text that can be displayed at the end of the game such as "YOU WIN!" and "GAME OVER" have been added.

2. Dialog for editing button text

A dialog box has been added for editing text to be displayed on buttons, speech bubbles, etc. Long press a button or speech bubble in the Scene Editing screen to show the dialog.

3. Enhancement for micro:bit connection

- Blocks for I2C communication have been added. A sample program is available at Create > Connect with external > Let's Connect to TAMIYA > 2. Move it with a game controller
- Updated blocks for sending/receiving data to/from micro:bit pins.

FIXES

Minor bug fixes

v2.2.10

NEW FUNCTIONS

1. New objects

- Unity-chan, the official character　of Unity Technologies Japan , and her fellow characters, Unity-chan’s songs and dialogues (voice), have been added.
  © Unity Technologies Japan/UCL.
- Valentine’s Day related 2D objects have been added.

FIXES

Minor bug fixes

v2.2.9

NEW FUNCTIONS

1. New objects

Three new monsters and 3D text objects have been added.

2. Color adjustment of blocks in the Script category

The colour of the blocks for displaying dialogue has been changed to make it easier to distinguish them from the blocks for displaying text.

FIXES

Minor bug fixes

v2.2.8

NEW FUNCTIONS

1. Class Locker

Fixed loading of shared programs in the Class Locker. Also, modified the thumbnail settings.

2. Background shadow

Fixed shadows in the background.

3. Operation speed improvement

Operation speed has been improved.

v2.2.7

NEW FUNCTIONS

1. New Year objects

New Year-related BGM, costumes, greeting cards and decorations have been added.
Placing decorations on the card and entering text will create a New Year's greeting card.
You can find cards and decorations in the "Tools" tab of the Add Object screen.

2. New effects

2D effects has been added. They can be used as a card decoration.
You can find them in the "Effects2D" tab of the Add Object screen.

FIXES

Minor bug fixes

v2.2.6

NEW FUNCTIONS

1. Christmas objects

Christmas-related objects, BGM, and costumes have been added. Placing decorations on the card and entering text will create a greeting card. You can find cards and decorations in the "Tools" tab of the Add Object screen.

2. New block

A new block that can change the display speed of dialogues has been added to the “Script" category.

[ ]'s talk speed [ ] delay [ ] scale [ ]

3. New motions

Defensive and parry motions have been added.

4. Program thumbnails

Thumbnail images can now be added to the programs in the locker and published programs. A screenshot image is taken with the “Camera” button on the Scene editing or Execution screen, and a thumbnail image is created.

5. Reset camera button

"Reset camera” button has been added to the Scene editing screen. Clicking the button returns the camera position to its initial position.

FIXES

Minor bug fixes

v2.2.5

NEW FUNCTIONS

1. Create a new program in the locker

New programs can now be created from lockers (and class lockers). Use “Create New” button at the bottom right of the locker screen.

2. New costumes
New costumes for Mai have been added.

3. New blocks
Added a block to disconnect the hinge connection in the ” Physics” category.

FIXES
Minor bug fixes

v2.2.4

NEW FUNCTIONS
1. New blocks for connecting game controllers
New blocks have been added to easily connect game controllers and move objects. Also added is a new lab with sample programs to show how to use these blocks.
To go to the lab : Create>New features>25. You can use a controller!

2. Graphics settings
More shadow settings have been added to the graphics settings.
You can now select one of the pre-set graphics settings options (low to very high) and set them all at once. You can use the custom settings to set them in detail in the same manner as before.

3. Screen layout adjustment
The number of works displayed on the search screen now increases in proportion to the screen size.

4. "Top" button to return to the top screen
A button has been added to allow the user to return to the top screen from the program editing screen.

FIXES

Minor bug fixes

v2.2.3

NEW FUNCTIONS

1. New object

A 3D model of YouTuber Koji-san, whose experimental videos using Unity's physics engine are popular, has been added.

2. New lab

A lab containing a sample program to operate a microcontroller robot (crawler type) made by TAMIYA running on micro:bit with Mind Render has been added.
Create > Connect with External >Let's connect to TAMIYA

FIXES

Minor bug fixes

v2.2.2

FIXES

Minor bug fixes

v2.2.0、v2.2.1

NEW FUNCTIONS

1. Class Locker function (paid service)

Class Locker function (paid service) has been added that allows users to invite other users to use the locker jointly.

2. Change screen transitions

Some screen transitions have been changed.

- The search screen for published programs can be accessed from "Programs" on the title screen.
- To return to the title screen during program editing, select the "Settings" icon and press the "Go back to the title screen" button on the Option screen that appears.

FIXES

Minor bug fixes

v2.1.32

NEW FUNCTIONS

1. New objects

Added a lunar surface to the background, a lunar rover, and a lunar base to the object.

FIXES

Minor bug fixes

v2.1.31

NEW FUNCTIONS

1. New micro:bit lab

Added a new lab with a game using micro:bit.

Lab>Connect with external>micro:bit>2. Fly! MR 1!

2. New objects

Added an undersea background, a submarine, and fireworks effects.

3. Improved search screen layout

Screen layout for Search, Ranking, My Locker, and Shared Locker has been changed so that more programs are displayed at once.

FIXES

Minor bug fixes

v2.1.30

NEW FUNCTIONS

1. SPIKE™ App3 support and new SPIKE™ lab
Added a lab where you can connect Mind Render and SPIKE™ to perform a various experiment. Sample programs are included to get sensor values and display text and graphics on the LEDs of the SPIKE hub. You can find this lab in Lab > Connect with external > SPIKE > 3. Control SPIKE.

2. Tap/click to add new objects during program execution
Added a function to get the coordinates of a tapped/clicked location during program execution. This makes it possible to add objects to the tapped/clicked location.

FIXES

Minor bug fixes

v2.1.29

NEW FUNCTIONS

1. Added Raspberry Pi labs and instruction blocks
Added labs and instruction blocks to run a car or to operate a robotic arm built with Raspberry Pi.
You can find sample programs in Lab > Connect with external > Raspberry Pi and new instruction blocks in the IoT category.

2. New videos
Series Video 2 (19 episodes in total) has been added. They explain how to create original game stages and gimmicks by combining objects.

3. New objects

Added a conveyor belt sushi restaurant, sushi, etc.

4. Added a tone creation function to MML

A tone creation screen has been added. It can be displayed from the "MML" button in the lower left corner of the screen.

FIXES

Minor bug fixes

v2.1.28

FIXES

Fixed minor bugs.

v2.1.27

NEW FUNCTIONS

1. MML support

You can now enter pitches, note lengths, etc. in MML format in the variable blocks and playback the song.

You can find a sample in Lab > New Features > "18. Play MML sounds.

2. New block

New camera instructions have been added to the Camera category.

・Border Emphasis [on|off] Thickness[ ] Color[ ] R[ ] G[ ] B[ ] Intensity[ ]

You can emphasize the outline of an object.

・Camera Avoid

Enables the camera to avoid obstacles.

3. New objects

Added houses to go inside. (House3, House4)

FIXES

Minor bug fixes

v2.1.26

NEW FUNCTIONS

1. New objects

Added a farm and more types of vehicles. Also added stairs that you can climb.

2. New block

In the Camera category, a block for specifying the mounting position of the camera that can be operated with the mouse, and a block for zoom operation, have been added.

- Set mouse camera to [ ] X [ ] Y [ ] Z [ ] screen X [ ] Y [ ]
- Camera zoom [ ]

FIXES

Minor bug fixes

v2.1.25

NEW FUNCTIONS

1. New objects

Added a wardrobe and a refrigerator with doors that you can open and put things inside. You can place various objects.

2. New block

A block has been added to the event category that can acquire the vertical and horizontal tilt values of the device.

- Device [Vertical tilt|Horizontal tilt]

FIXES

Minor bug fixes

v2.1.24

NEW FUNCTIONS

1. New top screen

The top screen has been updated with a new design. You can now go directly to videos, published programs, and ranking.

2. New objects

A house object that you can go inside, and furniture objects have been added. You can arrange the furniture inside the house.

3. New blocks

New blocks for hinge connections have been added to the "Physics" category.
These can be used for opening and closing doors, etc.
- Use [ ]'s spring [on/off] Spring [ ] Damper [ ]
- Set [ ]'s limits [on/off] Min. [ ] Max. [ ]

FIXES

Minor bug fixes

v2.1.23

NEW FUNCTIONS

1. New objects

Added land animals such as elephant and lion, sea animals such as penguin and dolphin, and birds such as eagle and seagull.

FIXES

Minor bug fixes

v2.1.22

NEW FUNCTIONS

1. New videos added to "Let's create with videos."
Added 14 videos to "Series video" (Episode 13-26).

2. Added new blocks to control LEGO® SPIKE™
Added new blocks to control LEGO®SPIKE™.
For sample program, please refer to Lab > Connecting with External > 1. Drive a car.
＊The existing Python version has been moved to "2. Drive a car.”

FIXES

Minor bug fixes

v2.1.21

FIXES

Fixed a problem that video playback takes time.
Fixed other minor bugs.

v2.1.20

NEW FUNCTIONS

1.Ranking
After logging in to the locker, you can see the ranking of the number of monthly plays and likes on the "Ranking" screen.

2. Game Ranking
A new block has been added to send scores and create in-game rankings.

3. News

News function has been added to introduce new features and other information. To use this font, use the following instruction.

4. New objects

Added monsters&weapons, animals, materials (cubes, spheres, etc.), food, etc.

5. Auto Login

Added an instruction block that allows you to set the precision of the physics engine.
Settings > General tab > Auto Login.

6. Numeric Input Panel

When entering numerical values in the instruction blocks, you can now use a dedicated input panel.
Settings > General tab > Numeric keypad.

7. New instruction block

Added an instruction block that allows you to set the precision of the physics engine.

- **Physics engine accuracy【 】**

FIXES

Minor bug fixes

v2.1.19

NEW FUNCTIONS

1. Objects with a Japanese theme

Added objects with a Japanese theme, and related motions.

・Four kinds of swords (Musashi, Wakizashi, Tanto, Shinai)

・Two backgrounds (Edo, Edo yashiki)

・Ten motions (slash, dodge, hit, fall down)

2. Added collision detection to equipment

Added collision detection to swords and other equipment. The relevant new instructions are as follows.

・**[Event]　When [　　]'s [　　] equipment hits [　　]**
　Execute the program when the character's equipment touches an opponent.

・**[Event]　When [　　]'s [　　] equipment hits [　　] group**
　Execute the program when the character's equipment touches an opponent group.

・**[Action]　[　　]'s equipment　position [right|left]　collider [on|off]**
　Sets a collision detection on the equipment. (Which hand holds the equipment, detection on|off)

3. New font

A new font has been added that can be used to display GAME CLEAR, GAME OVER, etc. The border and fill colors can be changed. To use this font, use the following instruction.

[Script]　　Display [　　] in [　　] Color [　] Outline [　] Size [　]

4. New videos added to "Let's create with videos."

Added 9 videos to "Complete story video" and 12 videos to "Series video".

5. Customize the display of hint items

You can now change the name of each item in the hints and save it as your favorite.

FIXES

Minor bug fixes

v2.1.18

FIXES

Minor bug fixes

v2.1.17

NEW FUNCTIONS

1. Place objects at the tapped (clicked) position

You can now tap (click) anywhere on the scene editing screen to add an object.

1. Click the "BG Settings" icon in the upper left corner of the scene editing screen.
2. The "BG Settings" screen will appear. Tap (click) on the image area.
3. Select an object on the screen that appears.
4. Tap (click) any position on the scene editing screen to place the object.

2. Select multiple objects

Multiple objects can now be selected at once. You can delete a group of objects or copy the physical settings of another object to multiple selected objects at once.

＜Multiple selection＞

- Turn on the "Multi" icon in the upper left corner of the screen and tap (click) on multiple objects you want to select. The selected objects will change color and start blinking.
- Instead of turning on the "Multi" icon, holding down the Ctrl (control) key to select results in the same result.
- Selecting an object in the object list results in the same result.

＜Range selection＞

- Turn on the "Range" icon and tap (click) on the first and the last object in the object list to select all objects in between.
- Instead of turning on the "Select Range" icon, holding down the Sift key on the keyboard to select results in the same result.

3. Copy physical settings

The physical settings of an object can now be copied and pasted to another object. You can also paste them to multiple objects at once.

4. Group settings on the scene editing screen

Group settings can now be set on the scene editing screen. As before, they can also be set using block instructions.

1. Create a group in the "Expansion" settings of the editing screen.
2. Select the group you created in "Group" in the upper right corner of the scene editing screen.
3. Tap (click) the objects you want to group in the object list.
4. The objects will be grouped.

5. Connect objects
Objects can now move like they are connected by a hinge. An example of its use is shown in "Newton's Cradle" in the "New Features" lab.

6. Add a new lab
New lab "Let's create with videos" has been added. You can create various games by referring to videos.

7. Dialog confirming deletion
You can now set whether to display a confirmation dialog before deleting an object.
It is in the "General" tab of the " Option" menu.
The default setting is "Yes".

8. Add background and objects
Added a baseball field background and ball, bat, and glove objects.

FIXES
Minor bug fixes

v2.1.16

NEW FUNCTIONS
1. Added the effects detail screen
Effect settings can now be viewed and edited on the "Object Settings" screen.

2. Added effects to the object of the mimic (clone) instructions
The block instructions for mimic can now be used for effects as well.

3. Show the number of times the program has been played
The number of times a published program was executed is now displayed in the locker and search screen.

4. Added a soccer stadium to the background object.
Added a soccer stadium to the background object.

5. Add the text display objects
Two text display objects have been added. Text alignment can now be selected from left-align, right-align, and center-align.

FIXES
Minor bug fixes

v2.1.15

NEW FUNCTIONS
1. Added the function to get data from spreadsheets
You can now load a Google spreadsheet and use the data there as a Mind Render dataset.
Note: Please choose "Anyone with the link" when you share the spreadsheet so that Mind Render can access it.
First, add any data set name on the Make Var screen. Next, press the "Set" button to go to the Get External Data screen, enter the spreadsheet URL and sheet name, and press the "Download" button.

2. Added the function to switch languages on the settings screen
You can now switch languages on the Settings screen. You can select either Japanese or English.

By default, it follows the language setting of the device. If the language of the device is Japanese, the display will be in Japanese; if it is in another language, the display will be in English.

FIXES

Minor bug fixes

v2.1.14

NEW FUNCTIONS

1. Added the Pin to switch between fixed/temporary display of blocks
You can now use the pin to switch between fixed and temporary display of blocks.
When pinned, the blocks are always displayed.
When unpinned, the blocks will be displayed only when the block category is selected.

2. Added the function of copying object parameters
You can now copy the coordinates, angle, and size of an object to another object in the scene edit screen.
First, display the object you wish to copy and click the Copy icon.
Next, display the object to be copied and press the Paste icon.

3. Effects can now be treated as objects
Effects can now be treated as objects. You can move them or apply force to them in the same way as you do with characters and other objects.
Note: If you want to treat effects as objects, please add them from the Add Object screen.

4. Added motion to characters
Added motion to Ren and Mai. (kick, slash, magic attack)

5. Added the function to send comments to programs
You can now send comments to published programs.

1. Log in to your locker and select the Search tab. On the search screen that appears, select the program you wish to run.
2. Press the Comment icon at the top of the program execution screen. Select up to three words from those displayed.
3. Posted comments can be viewed by pressing the Comments icon of the program that appears on the search screen.

6. Added the function to write a description of the program
Added the function to write a description of the program. You can write notes for yourself or an explanation for others when you publish your program.

1. Log in to your locker and select the My Locker tab. A list of saved programs will be displayed.
2. Press the Description icon of the program for which you want to write a description. A new screen will open. Write the description and press the Send button.
3. The description can be viewed by pressing the Description icon on the My Locker screen or the Search screen.

FIXES

Minor bug fixes

v2.1.13

NEW FUNCTIONS

1. Toggle fixed/temporary display of blocks
You can now select whether the blocks are always displayed or only when a category is selected. This can be set via the "Settings" icon。

2. Added a trash box for block removal
A trash box for block removal has been added which blinks when a block is to be removed. As before, drag & drop on the block category or block list will also remove the block.

FIXES

Fixed camera-related issues.

v2.1.12

NEW FUNCTIONS

1. Internet battle game

You can now create programs that allow you to play against an opponent on the Internet. Only turn-based games, e.g., rock-paper-scissors, are supported.
The command blocks to create a battle program are in the 'PvP' category.
You can play a sample game by selecting Lab > Play a match via internet connection > Let's play turn-based battle game.

2. Recording the program execution screen

A function has been added to allow recording while the program is running. By sharing the video, you can let other people see your program working on their devices that do not have Mind Render installed.
Run the program and press the red circle button next to the A~D button to start recording.
Recorded files are saved in folders such as Videos, Movies or Photos.
You can change the resolution and frame rate settings in the Capture tab of the Option menu.

3. Program publication and search

You can now make public your programs to others and search for other people's programs that have been published.

- Publish : In the 'My Locker' tab of your locker, check 'Publish' for the programs you want to make public. Others will be able to find them in the search.
- Search : In the 'Search' tab of your locker, enter a keyword and you will see your own and other people's programs that contain that word in the title or tag among the published programs.
- Entering a name (nickname) in the 'User' tab of the locker allows your nickname to appear in the search results.

Note: The programs in the search results can only be executed; you cannot see what are in the program or save them.

4. Evaluation of public programs
Added ability to evaluate public programs. Press the 'Like' icon on the program you like in the search results.

5. New lab
A new lab has been added.
Let's play turn-based battle game: a sample program for internet battles.
(Connect with external>Play a match via internet connection>Let's play turn-based battle game)

FIXES
Minor bug fixes

v2.1.11

NEW FUNCTIONS

1. Adjusted screen design
Overall screen design has been adjusted. (colors, buttons etc.).
The buttons on the scene screen have been reorganized.

- Buttons to control characters (change position/angle/size, undo/redo, ground) now appear automatically when an object is selected.
- Buttons to control grid now appear automatically when the grid is displayed.

2. Added variable monitoring function
The function to monitor the values of variables, lists and datasets during program execution has been added. Press the 'Monitor' button in the top left corner of the execution screen to open the menu.

3. Changed the way to add effects

Effects can now be selected and added directly from the command block. There is no longer an operation to add an effect with the 'Add object' button in the object list.

FIXES

Minor bug fixes

v2.1.10

NEW FUNCTIONS

1. Added function for characters to change the clothes and hold objects

Some characters can now change their clothes and have objects such as a sword or a shield in their hands.

- Only Ren, Mai and MR1 can change clothes.
- They can be selected on the Object Settings screen.

2. Changed the way to add sounds and effects

Sounds and effects can now be selected and added directly in the command blocks.

New blocks for adding sounds and effects in the Effect category.

- Effect [ ] at [ ] X [ ] Y [ ] Z [ ] Size [ ]
- Sound [ ] length [ ] repeat [ ]
- 3D sound [ ] from [ ] X [ ] Y [ ] Z [ ] repeat [ ]
- Stop sound [ ]

3. Linked block descriptions and tip videos

You can now see related hint videos from some block descriptions. Press the "Play" button next to the description to view it (The videos are only available in Japanese).

4. Added piano sound

Added piano sound.

5. New Labs

Added four new labs.

- Dharma drop experiment: Added the program introduced in the video by a YouTube channel "ko-ji (Physics Engine)".
- Rock-paper-scissors: You can play rock-paper-scissors with someone on the same network.
- Drive a car with LEGO SPIKE: You can drive a Mind Render car with a steering wheel built from SPIKE bricks. (LEGO (R) Education SPIKE (TM) Prime Set is necessary for this lab.)
- Answer quizzes with your voice: Let the voice recognition program learn your voice and answer quizzes with your voice. (A voice input device (M5StickC Plus) is necessary for this lab.)

FIXES

Minor bug fixes

v2.1.9

NEW FUNCTIONS

1. Text-to-speech function

Added the function to read out characters' lines and sentences.

- You can choose from four voices (two male voices, two female voices)
- Use the block below in the “Script” category.
  Talk [ ] Voice [ ]
- You can see how to use the block with the sample program.
  Lab > Sample Programs > Let’s speak.

2. New micro:bit lab “Let’s bowl.”

Added a new micro:bit lab. When you move the micro:bit, you can roll the bowling ball and hit the pins in the Mind Render.

You can see the lab by navigating from

Lab > What do you want to make? > Connect with external > Play with micro:bit

FIXES

Minor bug fixes

v2.1.8

NEW FUNCTIONS

1. Change screen design and screen transition after startup

The screen design and transition after startup have been changed.

・ News: Introducing the contents of the version upgrade.

・ Lab: The entrance to the lab.

・ Continue: Click here to start from where you left off last time.

・ Locker: Open the locker.

2. Enhanced saving function

Lab and locker programs can now be saved with the "Save" button.

In previous versions, the lab program was automatically saved only when the app was closed. Now you can save it by pressing the "Save" button at any time. You can now work while saving the contents.

Locker programs can now be saved by simply pressing the save button.

FIXES

Improvements have been made to stabilize the Bluetooth connection with the micro: bit.

Minor bug fixes and improvements

v2.1.7

NEW FUNCTIONS

1. Organize blocks in the "Action" category

Changed the display order and text of blocks in the "Action" category.

2. Copy of object

When copying an object, it will be inserted just below the original object.

3. Add block

・[ ] throw [ ] hgt [ ] str [ ] : Throw the opponent in front of you.

-Distance [ ] and [ ]: Calculate the distance between two objects.

4. Change the color of the hit area

The search area is displayed in blue (same as before), and the hit area is displayed in red to make it easier to distinguish.

5. Change screen layout

Moved the position of the Variable, Signal, and Group settings buttons to the bottom of the block category.

FIXES

Minor bug fixes and improvements

v2.1.6

NEW FUNCTIONS

1. Change in screen layout

The block categories are now placed in vertical direction on the left side of the blocks.

2. Statistical data

Some statistical data were added with which you can draw a graph.

X/Y category > Make Var. > Create a dataset > Settings button >Select, download, and add any data.

3. More visual help videos

Added help videos explaining how to set a search area, a hit area and so on, and sample programs.

4. New block

Added a new block that you can set the number of decimal places. The figures after the specified number of decimal places are round down. (Operator category)

FIXES

Minor bug fixes and improvements

v2.1.5

NEW FUNCTIONS

1. Object menu

The object menu that allows you to change, copy, delete, etc. objects is now always displayed at the top of the object list. You can operate on the selected object.

FIXES

Minor bug fixes and improvements

v2.1.4

NEW FUNCTIONS

1. Share program by links

You can now share the program with others by copying and sending a share link. Clicking the link launches Mind Render and loads the shared program if Mind Render is not installed on your device.

[How to send a link]

1. Start Mind Render and log in to My Locker.
2. In the "My Locker" tab, set any share code for the program you want to share. (Example: sharetest01)
3. Click the "Share" button displayed on the right side of the share code.
4. On the screen that appears, press the "Copy" button. The link written in blue will be copied.

5. "Paste" it in an email, message app, SNS app, etc. and send it to the person you want to share.

[How to load the program from the link]

1. Click the link you got.
2. Mind Render starts and the program is loaded. (If Mind Render is not installed on your device, nothing happens. Please install Mind Render.)

2. More visual help videos

Added help videos explaining how to display lines and texts.

FIXES

Minor bug fixes and improvements

v2.1.3

NEW FUNCTIONS

1. Share recorded sounds

You can now share your own recorded sounds with others. The shared sounds can be used in the program.

[How to operate: Share the sound you recorded with others]

1. First, record the sound. Click the "Add Object" button at the bottom right of the object list.
2. Select the “Sound” tab on the object screen.
3. Select the "+" icon in the upper left.
4. Record and name the sound on the screen that appears.
   Check the "Share" checkbox and set any share code. (Example: sharetest01)
   Click the “Save” button.
5. Tell the person you want to share the shared code you set.

You can share the recorded sound later.

1. Select the “Custom” tab on the object screen.

2. Press the "Settings" button (spanner picture) at the top left of the sound icon you want to share.
3. Check the "Share" checkbox and set any share code. (Example: sharetest01) Click the “Save” button.
4. Tell the person you want to share the shared code you set.

[How to operate: Listen to the shared sound, use the shared sound in the program]

1. Select the “Share” tab on the object screen.
2. Enter the shared code you were given and press the "Search" button. The shared sound icon will be displayed.

2. More visual help videos

Added help videos explaining basic operations such as copying blocks.

FIXES

Minor bug fixes and improvements

v2.1.2

FIXES

Fixed a bug that UDP communication could not be received on macOS version and other minor bugs.

v2.1.1

NEW FUNCTIONS

1. Land a selected object

You can ground the objects separately with the “Land” button on the scene edit screen. When you press the button, the selected object floating in the air is placed so that it touches the ground.

2. Improvement of the visual help

An indicator is displayed while the video is being loaded.

FIXES

Minor bug fixes and improvements

v2.1.0

NEW FUNCTIONS

1. Visual help

Added help videos that allows you to perform a reverse lookup from what you want to do, such as “How can I make a character walk?” or “What program should I make to have a character jump?” You can create a program easily using the sample programs while watching the videos.

2. Recording

You can now use your own recorded sound in the program.

3. Scene edit screen

Added a screen to edit the scene of the program. You can adjust the coordinates and angles while looking at the object, which will make it easier to place and move the object. Also, when you tap an icon on the object list, the camera will focus on that object. This makes it easier to find objects in your scene.

4. Show/hide “Tool” objects

You can now enable to show/hide “Tool” objects on the scene edit screen. You can hide buttons, joypads, etc. when it is difficult to move other objects which are behind them. (Even they are hidden, they will be displayed when the program is executed.)

FIXES

Minor bug fixes and improvements

v2.0.8

FIXES

Fixed an issue where the background object “Apocalypse” could not be loaded.

v2.0.7

NEW FUNCTIONS

1. Mind Render original character

Mind Render original character, Robot, has been added.

2. Delete Account button

Added "Delete Account" button in the locker screen. Click the button to delete your account. Please note that all the programs saved in the locker will also be deleted and will not be restored. If you want to use the locker again, please register your account again.
You can continue to use Mind Render even after you delete your account.

3. You can now connect to the micro:bit on both the Windows and mac versions. (Bluetooth connection must be available on your Windows PC or mac.)

[How to operate]

1. Download the hex file for Mind Render from the Mind Render homepage (https://mindrender.jp/en/).
2. Extract the downloaded file. Make sure you have the "micro:bit-Mind-Render.hex" file in the extracted folder.
3. Connect the micro to your Windows PC or mac with a USB cable. The micro:bit will be recognized as a drive and will appear in the Explorer or Finder.
4. Copy (drag and drop) the "micro:bit-Mind-Render.hex" file to the micro:bit. (The copied hex file will not be displayed in the micro:bit drive.) Remove the USB cable.
5. Turn on "Bluetooth" on the Windows Settings screen or the Mac System Preferences screen.

6. On the Mind Render screen, tap the "Add" button at the bottom right of the object list and select "micro:bit" on the "Tools" tab.
7. Micro:bit object is added to the object list.
8. The micro:bit image is displayed on the program execution screen, and the light starts blinking in a diamond shape. Also, a check mark will be displayed on the micro:bit LED screen.
9. Now you can create a program. The blocks for micro:bit are in the "micro:bit" category.

v2.0.6

NEW FUNCTIONS

1. Mind Render original characters

Mind Render original characters, Ren, Mai, and Dr. Tetori, have been added.

2. New speech bubble command block

This command allows you to display a speech bubble above the designated object without adding a “Bubble” object. You can continue to use the existing speech bubble commands and objects.

3. UDP communication support

You can now communicate between Mind Render and another device that supports UDP communication. It allows you to operate the device from within Mind Render. (Both must be connected to the same local area network.)

FIXES

Minor bug fixes and improvements

v2.0.5

FIXES

Minor bug fixes and improvements

v2.0.4

NEW FUNCTIONS

1. English mode

If the language setting of your device is other than Japanese, the app will start in English mode.

FIXES

Minor bug fixes and improvements

v1.1.7

NEW FUNCTIONS

1. Undo, Redo

Undo and Redo buttons have been added in the lower right of the Programming area. This allows you to restore the connection if you accidentally touch the blocks and their connection collapses.
The operation target is limited to the block operations within the same object such as move, delete, inputs, etc. It does not support other operations such as moving or rotating an object or copying blocks to another object.

2. Locally autosave programs loaded from the locker

Up to five programs loaded from the locker (My locker/Public locker) can now be autosaved in your device. This allows you to restore the previous contents if you edit the locker program and then accidentally load another program without saving.
The program will be saved in the History at the bottom of the Lab. The programs are listed in chronological order from 1 (oldest) to 5 (newest).

3 Sort and tag programs in the locker

You can now sort programs in the locker by name or by date.
Also, by adding tags (groups) to the program, you can select the programs to be displayed by the tag. Up to ten alphanumeric characters can be used for the tag name.

4. Import programs from the Public locker

You can import programs in the Public Locker to My Locker. Press the “Import” button of the program you want to import, then a copy of the selected program will be saved in My Locker with the same name.

5. Copy blocks

You can now copy and paste blocks in the Programming area.

[How to copy and paste blocks]

1. Long press (or click and hold) the block you want to copy.
   If you long press a block in the middle of the connected blocks, the following blocks below will be copied together.
2. Copying is complete when the word “Copy” is displayed momentarily on the left shoulder of the block.
3. Long press (or click and hold) on an empty area in the Programming area, and the copied blocks will be pasted.

You can copy blocks in one mission and paste them in another mission.

6. Dataset

You can define variables in tabular form with rows and columns. Blocks to manage datasets are in Advanced > Variable.

7. Page assignment

You can create programs on multiple pages and switch pages with the buttons 1 to 4 at the bottom of the Programming area.

This allows, for example, instructors to use pages 2 to 4 to create program assignments and students to use page 1 to program assignments.

Also, if one object has so many blocks that it takes long to load, dividing them into pages will make the load faster.

8. New blocks

- [Show (add)] : Append a new message to the next line, leaving the previous one (Basic > Variables)
- [Show (add) title , unit] : Display messages with title and/or unit (Basic > Variables)
- [Set to of target] : Dynamically specify the other party while running programs (Advanced > Game)

9. Add new objects
We have added some models (characters, food, etc.), backgrounds, sounds, and effects.

10. Add new labs
We have added a new type of labs “Forest girl” and “Space boy” where you can create programs to complete the story, and “Advanced lab 4 Game” where you can play fun games.

FIXES

Minor bug fixes and improvements

V1.1.5

FIXES

Minor bug fixes and improvements

V1.1.4

FIXES

Minor bug fixes and improvements

v1.1.3

NEW FUNCTIONS

1. Added command blocks

New command blocks have been added to the "[Basic] Event", "[Basic] Control", "[Basic] Variable", "[Advanced] Object", "[Advanced] Effect", and the newly added "[Advanced] Game".

With these new blocks, you can now group objects, send and receive events, move between missions, display texts and variables on the screen, and add new objects to specified coordinates. You will be able to create more wide variety of programs.

2. Change of command block operation

Command block operation has been changed. When bringing a block from the block list on the left side of the screen to the programming area in the center, drag it straight to the right. Vertical movement will scroll the block list.

3. Improvement of operation when scaling screen size and rotating screen (camera operation)

・ Pinch in/pinch out to move the screen (camera) back and forth
・ Swipe up/down/left/right with two fingers to rotate the screen (camera)
・ Swipe up/down/left/right with three fingers to move the screen (camera) in that direction

FIXES

Minor bug fixes and improvements

v1.1.2

FIXES

Minor bug fixes and improvements

v1.1.0

NEW FUNCTIONS

4. Added AI Functions

We added a self-driving car that was trained to drive avoiding collision with the wall and obstacles on the racetrack. At some level, it will avoid obstacles even if they are moved.

[How to Operate]

5. Select the [Lab] Menu, and on the [Lab] screen select Mission 1 from [Adv 3]. (Please scroll down to the bottom of the screen.)
6. If you start the program, the car will begin self-driving.
   The red and green lines coming out from the front of the car are sensors. It is read when the car collides with the wall or obstacles (rocks). It is green when there is nothing to collide against inside the sensor boundaries.
7. Stop the program and try to move the location of the rock by yourself. Tap on the rock you want to move and move it to the direction of the arrow when the arrows are being shown on the rock. If difficult to move it back and forth, tap the [y] of the 3D arrow on the upper right screen. Pinch in the screen so that you will see the entire racetrack with an overhead view. It will be easier to move it.
8. When you start the program, the car will start self-driving with the new rock location. Depending on the location of the rock, it might not be able to avoid enough and may collide.

This car has been equipped with a trained AI program. You can check on YouTube how the AI program is learning self-driving.

9. Improvement on content for elementary school students [Junior]

- The content is moved to [Lab 6].
- You can use [Junior] block commands in the [Standard] labs and use [Standard] command blocks in the [Junior] lab.
- You can save programs made in [Lab 6] to the locker.
- We changed part of the settings of Mission 2.

[How to Operate]

1. Select the [Lab] Menu, and on the [Lab] screen select either Mission 1 or 2 of the [Lab 6].
2. To switch to the [Junior] commands, select [Settings] from the command category and select the command set [Junior].
3. Create [Pat] and [Pat ll] programs.
4. You can save the created program to the locker.

10. Added locker sharing function

A function to share programs saved in the locker with other users is now added. You can use it to send out programming assignments to others.

[How to Operate]

1. Login to the Locker.
2. Specify programs you want to share. In the [My Locker] tab, put a check to the [Share] checkbox of the programs you want to share.
3. Set a Public ID (password). Any users who know this Public ID can download your shared programs.
   In the [Settings] tab, enter any character string to the [Public ID] area and tap the [Share] button. (You can use hiragana, katakana, alphanumeric and some symbols)
4. Other users log in to their own Locker, enter the Public ID set above and tap the [Change] button in the [Public Locker] tab. The sharable programs will be displayed.
5. Tap [Load] button to load the program you want.

11. Support [micro:bit]

You can now use micro:bit functions from Mind Render. For example, you can read out the light sensor value in micro:bit to control the brightness of the lamp in Mind Render.

[How to Operate]

1. Install the hex file for Mind Render to micro:bit. (You can download the file from the Mind Render homepage (https://mindrender.jp/).

2. Turn on Bluetooth on the setting screen of the tablet or smartphone to connect to micro:bit.
3. On the Mind Render screen, select the [Add] button in the object list and select [micro:bit] in the [tool] tab.
4. micro:bit will be added to the object list. Also on the Mind Render screen, the micro:bit image will be displayed. If the diamond shape light is blinking, the connection is completed. (If the light is not blinking, then tap on the micro:bit image.)
5. Create programs. The command to use micro:bit functions can be found in the command category [Advanced] > [micro:bit].

FIXES

Minor bug fixes and improvements

V 1.0.9

NEW FUNCTIONS

1. Added [Junior] content

[Junior] Content for elementary school students, which enables programming with easy-to-understand commands such as [go forward ten steps], [turn right] has been added. The number of commands is limited to the minimum needed.

[How to Operate]

1. Select [Settings] from the command category.
2. Select the command set [Junior].
3. The commands and mission will switch to [Junior].
4. Create programs for [Pat] and [Pat ll].

FIXES

Minor bug fixes and improvements

v 1.0.8

New Functions

1. Added a new camera command

A command has been added to easily put the camera on the front or back of an object by selecting options such as [front], [back] and so on. You can continue to use the existing camera setting method, too.

[How to Operate]

1. Select [Camera] from the basic command category.
2. Select the top command [Set camera [self] [front]]
3. You have options such as front, back, above, below, ・・・ to select the location where you want to put it.

Fixes

Minor bug fixes and improvements

v 1.0.7

Fixes

Minor bug fixes and improvements

v 1.0.6

Fixes

Minor bug fixes and improvements

v 1.0.5

Fixes

Minor bug fixes and improvements

V 1.0.4

NEW FUNCTIONS

1. Added English Version

An English Version has been added. When the language setting of the device is other than Japanese, the English version will start.

2. Changing the order of the Object List

You can change the order of the objects in the Object List.

[How to Operate]

1. Hold down on the object you want to change the location of.
2. When the object starts blinking, you can drag and drop to the desired location up and down.

FIXES

Minor bug fixes and improvements

V 1.0.3

NEW FUNCTIONS

1. Adjust camera location

You can use the controllers now to change the location and angle of the camera attached to an object. It is easier to adjust the camera location.

[How to Operate]

1. Check the box on the bottom right of [Camera] in the object list.
2. When full screen display, two controllers are displayed. You can change location (front/back, left/right) with [Position] controller and angle (front/back, left/right) with [Rotation] controller.
3. Change the camera setting values in the program. If you do not change them, the new location and angle will not apply.

Tap on the area that says [Abs ▼] which is in the upper right of [Camera] in the object list.

4. Select the object you want to adjust the camera location of.
5. The location (pos) and angle (rot) of the selected object will be displayed. Each value from left is x, y and z coordinate or angle. You will enter these values to the camera command in the program.

2. Copy program to other missions

You can now copy your program to other missions.

[How to Operate]

1. Drag and drop the programs you want to copy to [Copy] in the object list. Make sure that the programs are there in [Copy].
2. Open the mission you want to paste the program to. (It can be a mission from another Lab.)
3. Select [Copy] from the object list. The copied programs will be displayed in the programming area.
4. Scroll the object list and display the object you want to paste the program to. (Please do not select that object.)
5. Drag and drop the programs over that object from the programming area.

3. Connecting to external game controllers

You can easily connect to external controllers. You can move drones and cars in Mind Render with game controllers.

[How to Operate]

1. Connect the device and game controller through Bluetooth.
2. Tap [Add] button in the object list and select [GameController] on the [Tool] screen.
3. A game controller image will be displayed in the thumbnail. If the light is blinking, the connection is completed.
4. Move using the controller to fly a drone or race a car.

v 1.0.2

Fixes

Minor bug fixes and improvements

v 1.0.1

New Release