



INSTRUCTION MANUAL

CTRS-100A UPDATE SOFTWARE

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1. IMPLEMENTATION NOTE (PLEASE BE SURE TO READ)

Before executing the update, check the CPU version of the CTRS-100A and the model of the unit connected to the CTRS-100A.

- (1) Connect to CTRS-100A from the update software and click the "Version check" button. For the detailed procedure, see 1 to 5 in "3-3. Operating procedure".
- (2) On the version check screen, check if there is a unit with "UNKNOWN" displayed in the device configuration. **If the CPU version of the CTRS-100A is older than 01.08**, the update cannot be performed. If there is an "UNKNOWN" unit, remove the unit from the device configuration once.
- (3) Follow this instruction manual to update.
- (4) If any unit was removed from the device configuration in step (2), reconnect the unit after the update is complete, and then execute the update again.

If the **update software version is 01.09 or later and the CPU version of the CTRS-100A is older than 01.13**,

"4. UPDATE USING REMOTE CONTROL UNIT" cannot be executed. Be sure to use the update software to update the CTRS-100A.

2. OUTLINE

This software is for updating the compact recorder CTRS-100A and various units. This instruction manual describes the operating environment, operating method, and precautions of this software.

2-1. Target device

This software supports the devices shown in the table below. For handling of each device, refer to the instruction manual corresponding to the table below.

Device Name	Instruction Manual
CTRS-100A	CTRS-100A Compact Recorder 【Hardware】
CTRS-RCU010A	
CTRS-CDV010A	
CTRS-CVPS010A	
CTRS-CTA010A	
CTRS-IEPE010A	
CTRS-SYNC010A	
CTRS-BATT010A	
CTRS-WLAN010A/011A/012A	
CTRS-CAG010A/CAG011A	

2-2. Operating environment

The environment in which this software operates is shown below.

OS	Windows11/Windows10 Japanese / English 64bit / 32bit (64bit only for Windows11)
Interface	100Base-TX, USB2.0 or USB3.0



To use this software with the USB interface, it is necessary to install the USB driver
The installation of the USB driver is done at the time of setting up the control software.
For detail, refer to the control software setup manual.

3. UPDATE PROCEDURE

3-1. Preparation

After downloading and unzipping this software set from our homepage, please confirm that it has the following folder structure. This software will not operate normally if the folder structure is not shown below.

CTRS-UPDATE

--- IM-A-1301I_CTRS-100A_UPDATESOFTWARE_ENG.pdf	: This instruction manual
--- IM-A-1300I_CTRS-100A アップデートソフト取扱説明書(日本語).pdf	: Japanese instruction manual
--- CTRS-Update.exe	: Update software executable file
--- CTRS_Update.LST	: Update management file
--- Ctrs100Usb.dll	: DLL for USB control
--- UPDATE	: Update file storage folder
--- Various update files	

3-2. Screen explanation

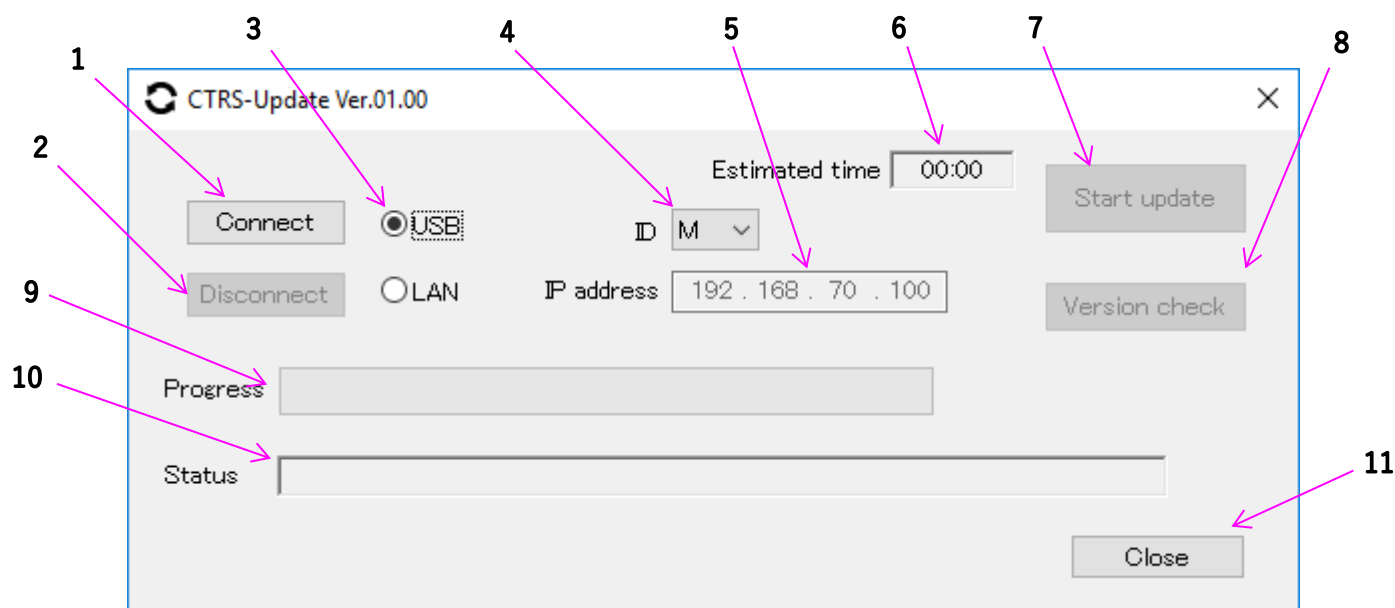


Figure 1: Update software screen (at startup)

No.	Item name	Function
1	Connect	Click the button to connect the PC and CTRS-100A with the interface selected in No.3. If the connection is successful, the update will be ready.
2	Disconnect	Click the button to disconnect the PC and CTRS-100A.
3	Interface	Select the interface used for connecting the PC and CTRS-100A from USB or LAN.
4	Device ID	Select the device ID of CTRS-100A to connect. It is valid only when USB is selected in No.3.
5	IP address	Enter the IP address of CTRS-100A to connect. It is valid only when LAN is selected in No.3.
6	Estimated time	Displays the estimated time until the update is completed.
7	Start update	Click the button to start updating CTRS-100A and various units.
8	Version check	Click the button to display the version confirmation screen for CTRS-100A and various modules. (See Figure 2)
9	Progress bar	The update progress is displayed.
10	Status	Displays the current update software status.
11	Close	Click the button to exit the update software.

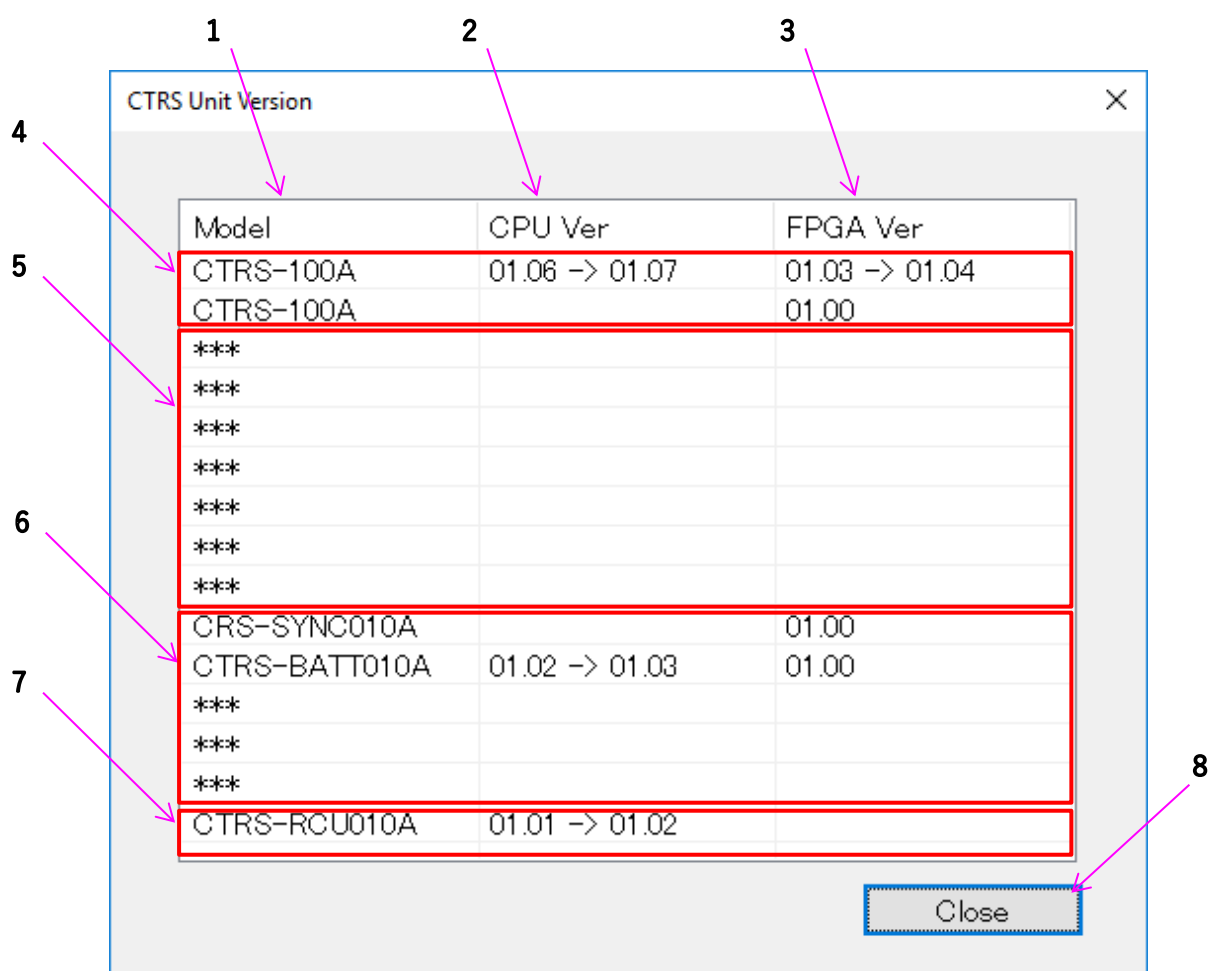


Figure 2: Version confirmation screen

No.	Item name	Function
1	Model	This column displays the model information of the connected unit.
2	CPU version	This column displays the CPU version information of the connected module. The current version is displayed on the left side of the arrow, and the updated version is displayed on the right side.
3	FPGA version	This column displays the FPGA version of the connected unit. The current version is displayed on the left side of the arrow, and the version to be updated is displayed on the right side.
4	CTRS-100A information	This row displays various information of CTRS-100A. The control section is displayed on the upper row and the measurement section information is displayed on the lower row.
5	Measure unit information	This row displays various information about the measurement unit. Information for up to 7 units is displayed according to the number of connected units.

No.	Item name	Function
6	Expansion unit information	This row displays various information about the expansion unit. Information for up to 5 units is displayed according to the number of connected units.
7	Remote control unit information	This row displays various information of the remote control unit.
8	Close	Click the button to close the version confirmation screen.



- The "Estimated time" and "Progress" are for reference only, and the update may be completed before the remaining time reaches zero.
- If the unit does not have a CPU or FPGA, the corresponding section of version information will be blank.

3-3. Operating procedure

1. Connect the CTRS-100A to the various units to be updated. Connect the external power supply to the power connector and turn on the main unit. Refer to "Instruction Manual CTRS-100A Compact Recorder [Hardware]".



CAUTION

When the battery unit CTRS-BATT010A is included in the equipment configuration, be sure to use the external power supply. If the remaining charge reaches 0% during the update with battery operation, repair may be required.

Connect the external power supply to the power connector of CTRS-BATT010A.

2. Connect CTRS-100A and the PC with USB or wired LAN. When connecting via wired LAN, the Synchronization unit CTRS-SYNC010A is required. For details on the connection method, refer to "Instruction Manual CTRS-100A Compact Recorder [Hardware]".
3. If control software such as DCS-100A is open, exit all.
Turn on the power of CTRS-100A and start the update software "CTRS-Update.exe".

4. From "Interface", select "USB" or "LAN".

- When USB is selected, select the device ID of CTRS-100A to be updated in "Device ID".

If you have not connected the synchronization unit, select "M".

- When LAN is selected, enter the IP address of CTRS-100A to be updated in "IP Address".

5. Click the "Connect" button. When the connection between the PC and CTRS-100A is successful, the status shown in Fig. 3 is displayed. Click the "Version check" button to display the version confirmation screen (see Figure 2).

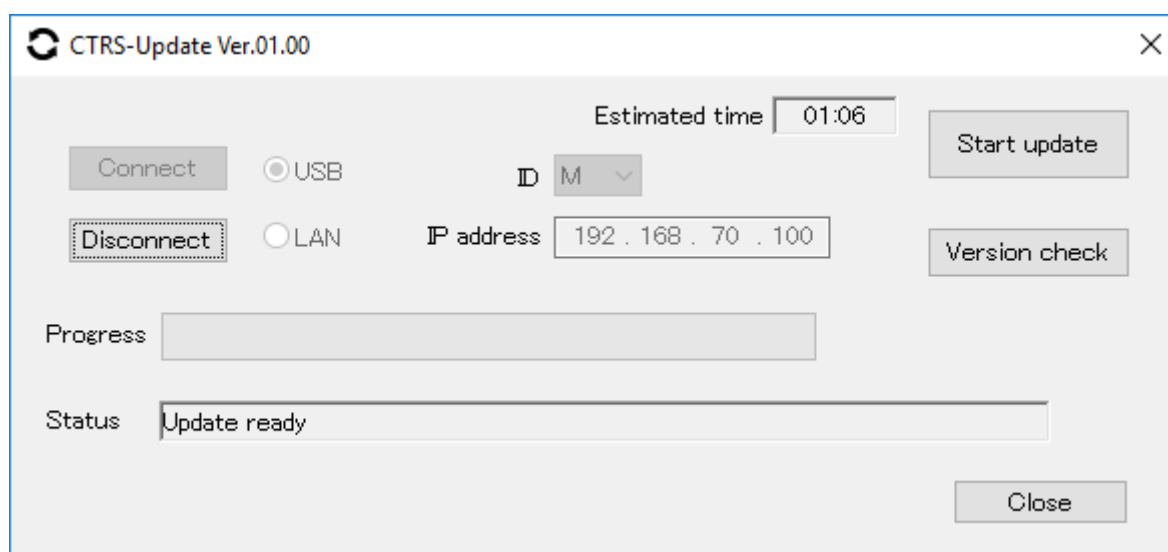


Figure3: Update software screen



If the connection between CTRS-100A and PC fails, check the following items.

- The cable connecting the CTRS-100A and the PC is firmly inserted.
- The CTRS-100A is recognized by the device manager of PC (when using USB).
- The IP setting of the PC is set to communicate with CTRS-100A (when using LAN).
- The CTRS-100A is turned on.
- The interface selection switch setting is correct when the synchronous unit is connected.
- No other control software is running.
- The CTRS-100A is not in AD conversion (measurement) operation.
- The connection method is not wireless LAN when the wireless LAN unit is connected.

6. Click the "Start update" button to start the update. When the remote control unit is connected, the remote control buzzer beeps.

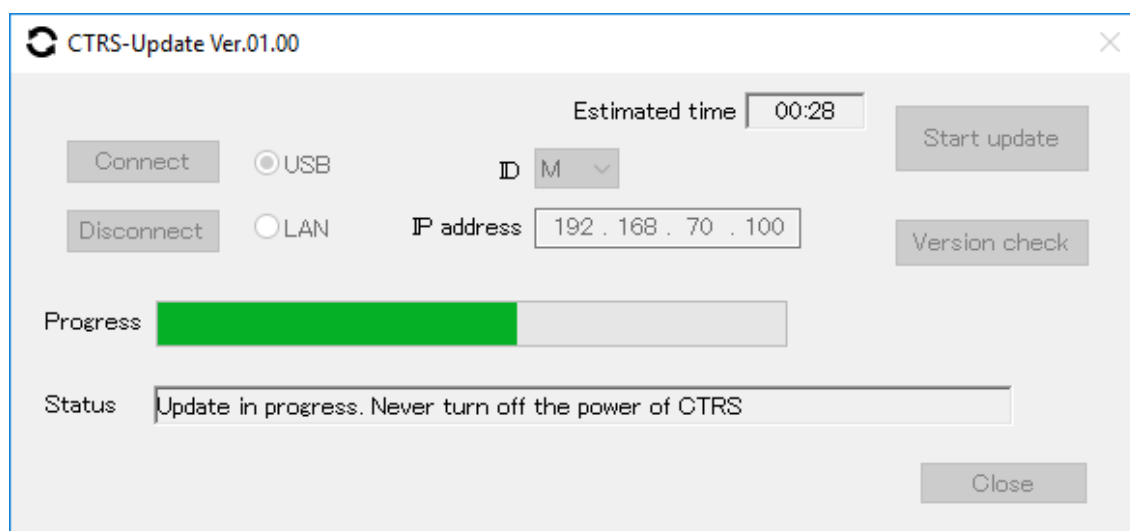


Figure 4: Update software screen (Updating)



CAUTION

- Be sure to keep the following items until the update is completed.

•Do not disconnect the various cables or the AC adapter.

•Do not add units or remove connected units.

•Do not turn off the CTRS-100A power.

•Do not turn off your PC.

If you perform the above operations during the update, repair may be required.

- If the operation is abnormal after the update, please contact our sales office or your nearest distributor.

7. When the update is complete, the remote control buzzer will beep when the remote control unit is connected. CTRS-100A will restart automatically about 3 seconds after the following screen is displayed.

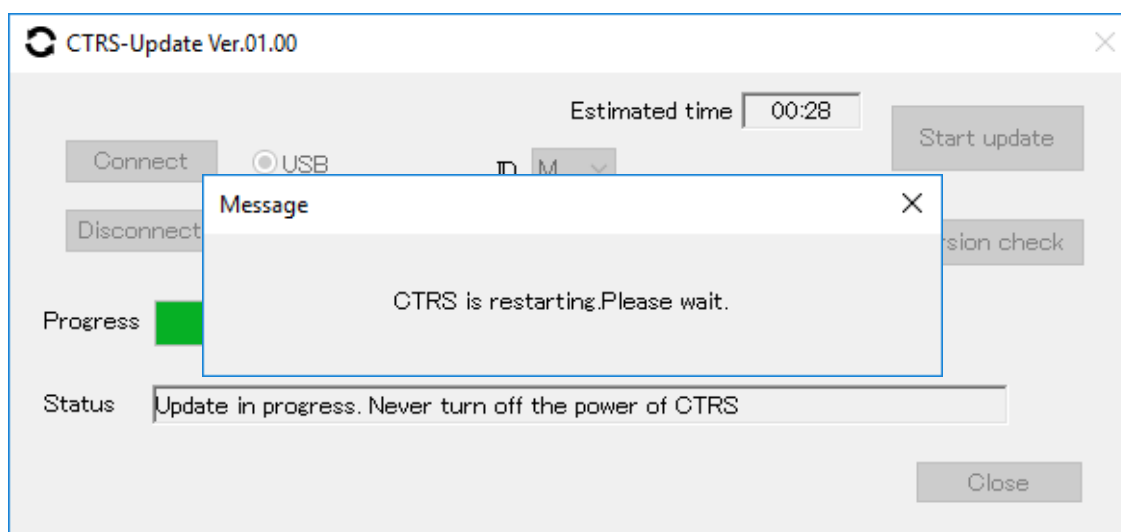


Figure 5: Update software screen (Immediately after the update)

8. After restarting CTRS-100A, the following screen is displayed and the update is completed.

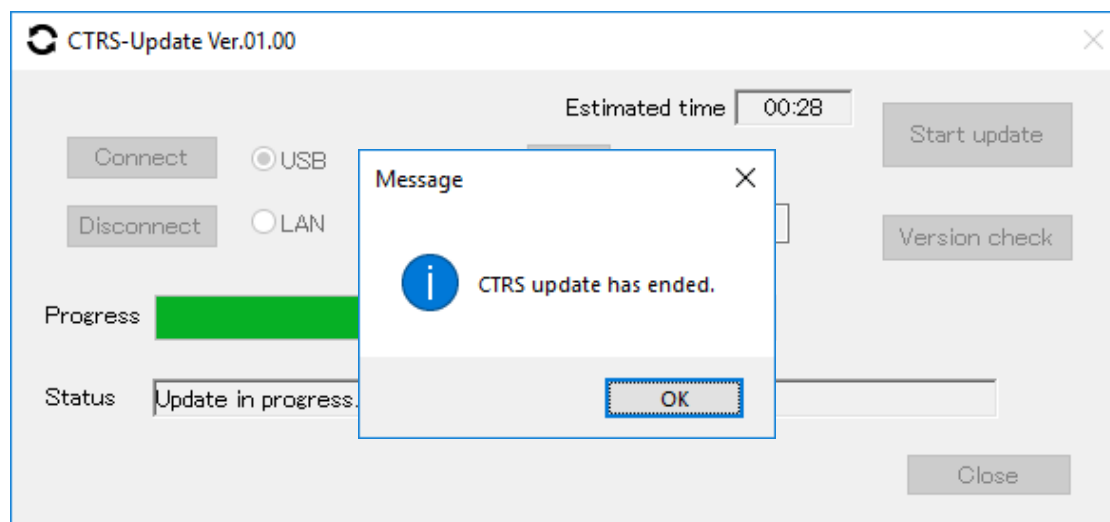


Figure 6: Update software screen (After restarting CTRS-100A)

9. Click the "Close" button to exit the update software.



- The status LEDs of various modules being updated light up as follows.

The status LED of the unit that is not the update target does not light.

- Waiting for update : Lights in purple
- Update is in progress : Flashing blue
- Update completed : Lights in blue

In the case of CTRS-100A, the update status of the measurement section is indicated by a status LED, and the update status of the control section is indicated by a channel status LED.

- Update processing will not be performed for units whose version is already the latest. However, if multiple Strain/Voltage units are connected and even one of them is not the latest version, the update process will be executed for all connected Strain/Voltage units.

4. UPDATE USING REMOTE CONTROL UNIT

When the remote control unit CTRS-RCU010A is connected, the CTRS-100A and various units can be updated without using the update software.

4-1. Preparation

After downloading and unzipping this software set from our homepage, please confirm that it has the following folder structure.

CTRS-UPDATE

---① IM-A-1301I_CTRS-100A_UPDATESOFTWARE_ENG.pdf	: This instruction manual
---② IM-A-1300I_CTRS-100A アップデートソフト取扱説明書(日本語).pdf	: Japanese instruction manual
---③ CTRS-Update.exe	: Update software executable file
---④ CTRS_Update.LST	: Update management file
---⑤ Ctrs100Usb.dll	: DLL for USB control
---⑥ UPDATE	: Update file storage folder
--- Various update files	

Copy ④ and ⑥ from the above files and folders directly under the SD card drive.

④ CTRS_Update.LST	: Update management file
⑥ UPDATE	: Update file storage folder
--- Various update files	

4-2. Operating procedure

1. Connect the remote control unit to the turned off CTRS-100A and insert the SD card prepared in 4-1.
2. While pressing the BAL button and OPTION1 button of the remote control unit at the same time, power on CTRS-100A.
At this time, press and hold the button until the remote control buzzer sounds beep.
3. When the update starts, the remote control buzzer will beep. If no sound is heard, start over from step 2. At this time, if the file or folder structure on the SD card is incomplete, the remote control buzzer will continue to beep and all the LEDs of the connected unit will blink red. Turn off the CTRS-100A power once and check the folder structure in the SD card.
4. Please wait until the status LEDs of all units stop blinking.
5. When the update is completed, the remote control buzzer will beep and the CTRS-100A will restart automatically after about 3 seconds.



- The operation of the status LED of each unit during the update is the same as when using the update software.
- When using the remote control unit to update, update processing is executed for all units regardless of whether the connected unit is the latest version.

**CAUTION**

- Be sure to keep the following items until the update is completed.

- **Do not remove the AC adapter.**

- **Do not add units or remove connected units.**

- **Do not turn off the CTRS-100A power.**

- **Do not remove or insert the SD card.**

If any of the above operations are performed during the update, repair may be required.

- If the operation is abnormal after the update, please contact our sales office or your nearest distributor.
- If the **update software version is 01.09 or later and the CPU version of the CTRS-100A is older than 01.13**, cannot perform updates using the remote control unit. Be sure to use the update software to update the CTRS-100A.