

Shizuoka Seiki

SINGLE GRAIN MOISTURE METER
CTR-500FE

COMMUNICATION SOFTWARE
OWNER'S MANUAL

Shizuoka Seiki Co., Ltd.

< Notice >

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1. Introduction

This software for PC communication is only for CTR-500FE.

This software cannot be used for other uses.

With communication software the following is available.

① Fine adjustment of moisture content.

You can fine-tune the moisture content of each grain within a range of $\pm 2.0\%$.

Please use it when you require to correct the moisture content error and the difference in moisture meter.

② Copy of calibration curve.

The calibration curve for each grain range can be copied to the user range for use.

Please use when you require to arrange and use a standard calibration curve.

③ Registration to user range.

You can create and register your own calibration curve.

It is useful when matching to your moisture meter and measuring grain that is not registered.

④ Receiving measurement results.

You can download the measurement results to the PC by connecting the PC and the moisture meter.

And downloaded data can be saved in a text file.

⑤ Remote control.

The moisture meter can be measured remotely from a personal computer.

2. System requirements

Item	Contents
Object OS	Windows 7、Windows 8、Windows 10(32, 64 Bit) ※Note 1
Communicate Port	USB port、RS-232C port ※Note 2、※Note 3

※Note 1 Operation is not secured the above Object OS condition.
Windows is registered trademark of Microsoft Corporation.

※Note 2 The RS-232C cable is not attached to this product.
Please prepare a commercial USB / RS-232C cable (reverse)
in the case of use of the software for communication.

For the type of cable, refer to "3-3. Connection with CTR-500FE".

※Note 3 Whether to communicate with USB or RS-232C is set on the CTR-500FE side.
For more details, see the communication function in the instruction manual.
The default setting is USB.

3. Installation.

3-1. Installation of driver.

1) Double-click [CDM21216_Setup.exe] in the [CTR-500FE communication software] folder downloaded from our website.

*The driver manufactured by FTDI. Follow the instructions to install on screen.

2) The setup screen starts up. Click the [Extract] button.



3) The installation wizard screen will start. Click the [Next] button.



*The screen is a Japanese version OS.
(Overseas OS may be different from Japanese version OS.)

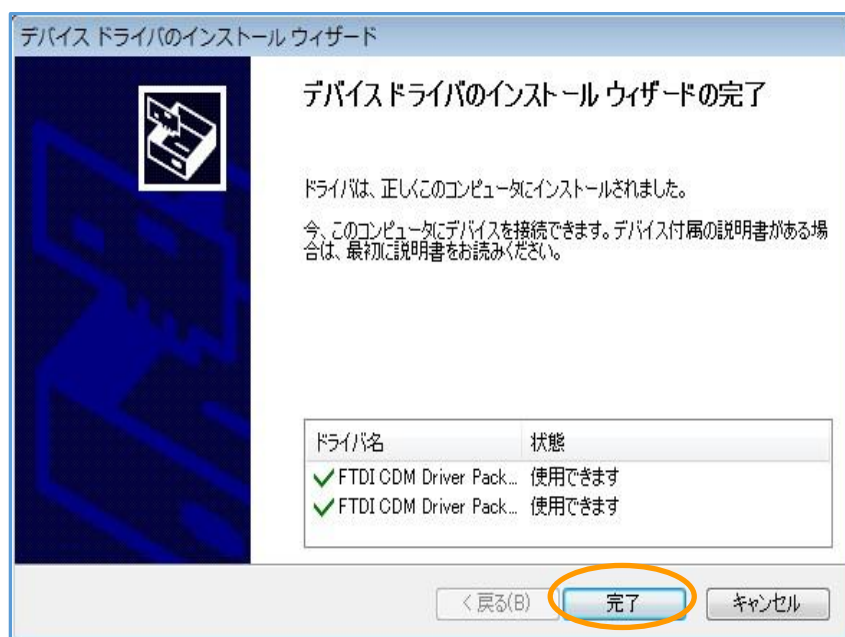
The license agreement screen will be displayed.
Check [I agree] and click the [Next] button.



5) Installation of the driver will begin.

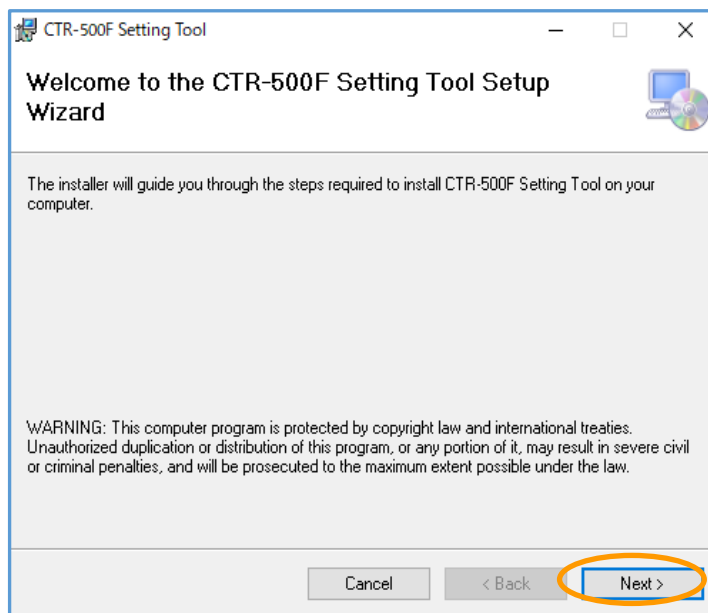


6) When installation of the driver is completed, click the [Finish] button.



3-2. Installation of communication software.

- 1) Double-click [SetupJPN.msi]
in the [CTR-500FE communication software] folder downloaded from our website.
- 2) The screen of setup starts automatically.

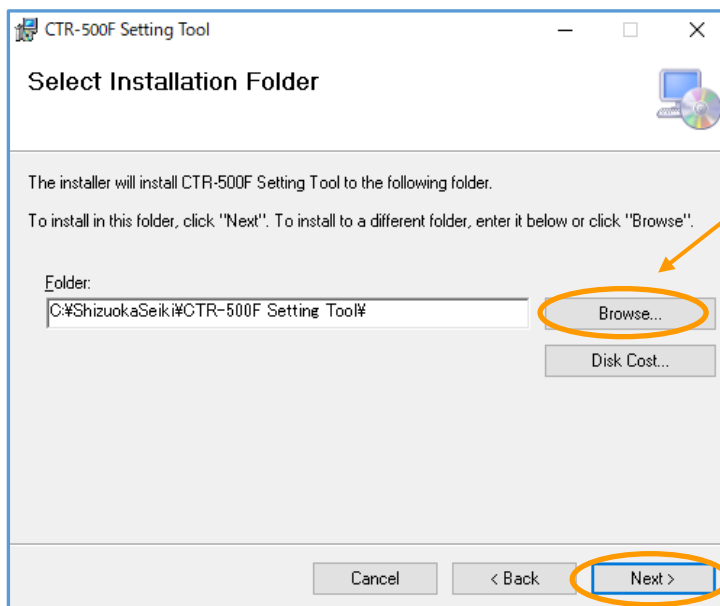


Click the [next] button.

- 3) Check the installation folder.

The default is [C:¥ShizuokaSeiki¥CTR-500F Setting Tool¥].

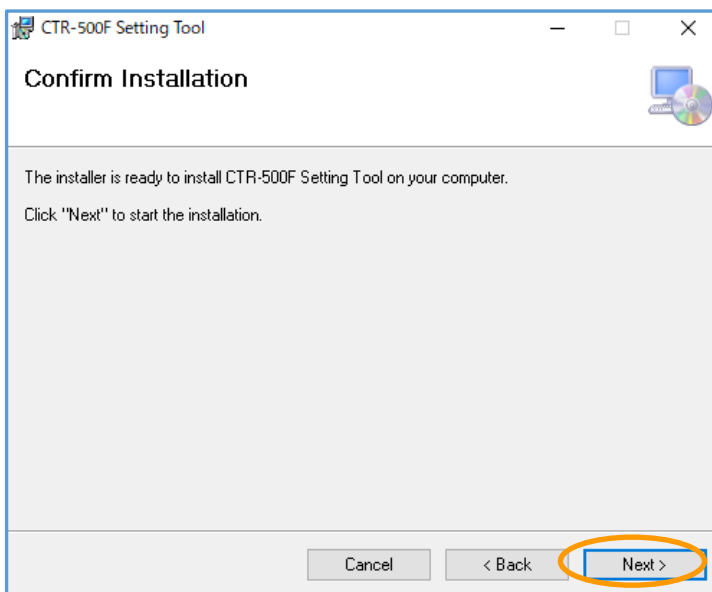
The [next] button will be clicked if there is no necessity for change.



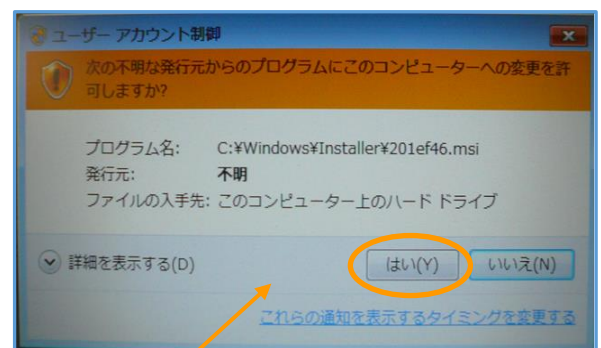
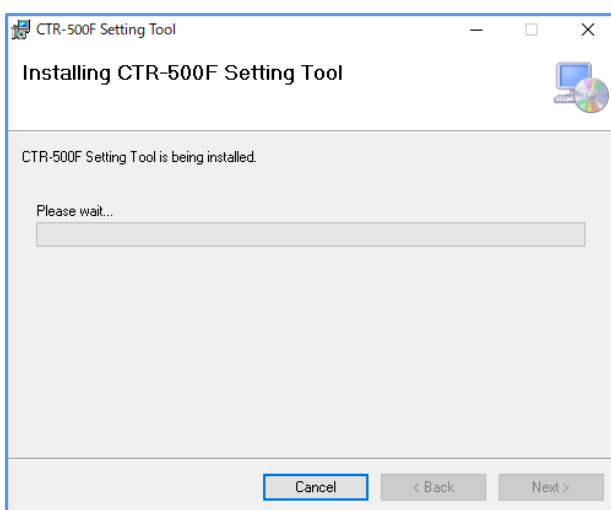
When changing the folder to install, click the [reference] button and determine the installation place.

Click the [next] button.

4) Start installation

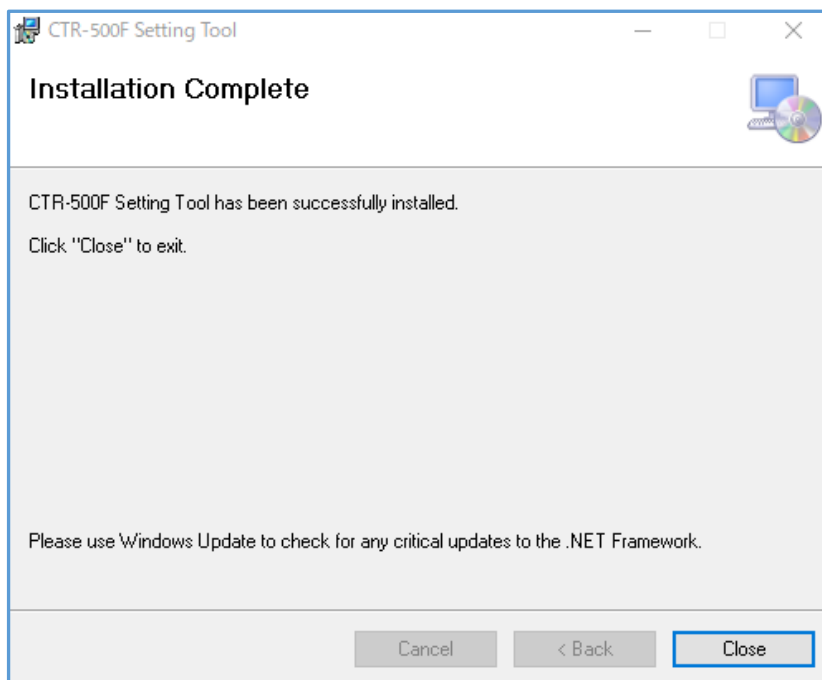


Click of the [next] button to start installation.



When “for programs from the following unknown publishers permission of change to this computer will you do?” is displayed, click “Yes”.

*It may take some time to start the installation. (About 1 minute)

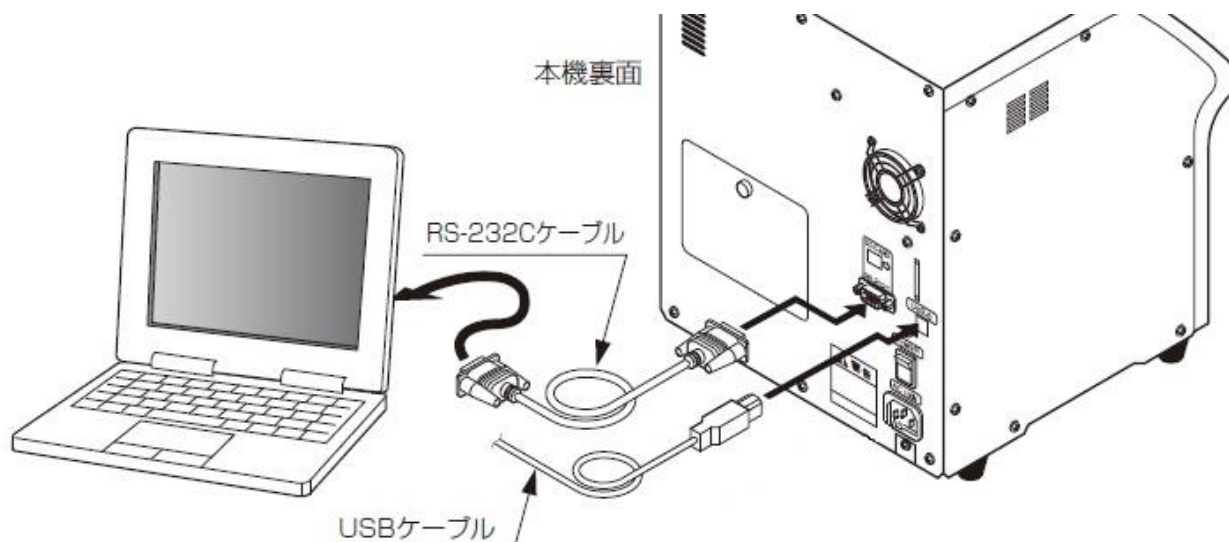


When the installation is completed, click the "Close" button.

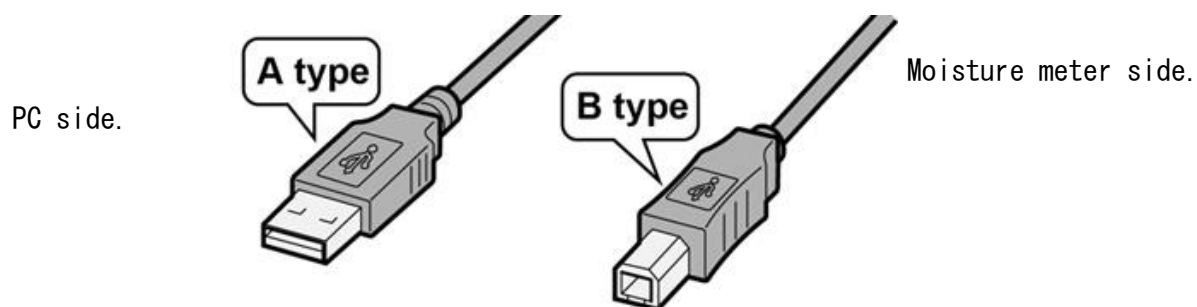
3-3. Connecting with CTR-500FE.

When using the software for communication, PC and CTR-500FE are connected by the RS-232C cable (reverse) or USB cable.

Please prepare RS-232C cable or USB cable, previously.



When connecting with a USB cable.



<When connecting with RS-232C cable>

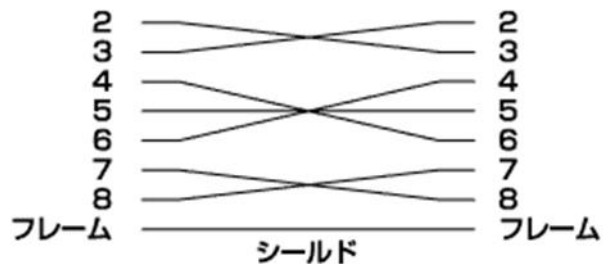
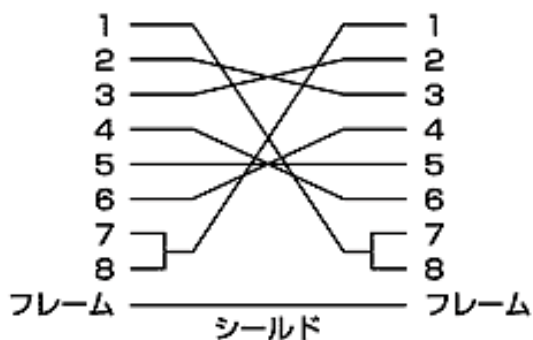
RS-232C cable reverse (cross) cable is used for CTR-500FE communication. Communication is not possible with a straight cable. (E50 occurs.) Be sure to use a reverse (cross) cable.

<Reference figure>

Available cable.

The connector shape on the cable side is D-sub 9 pin (female).

- Reverse cable with 9 pins on both ends○
- Interlink reverse cable with 9 pins on both ends○



◆Unusable cable

- Straight cable with 9 pins on both ends ×
Cannot be used.



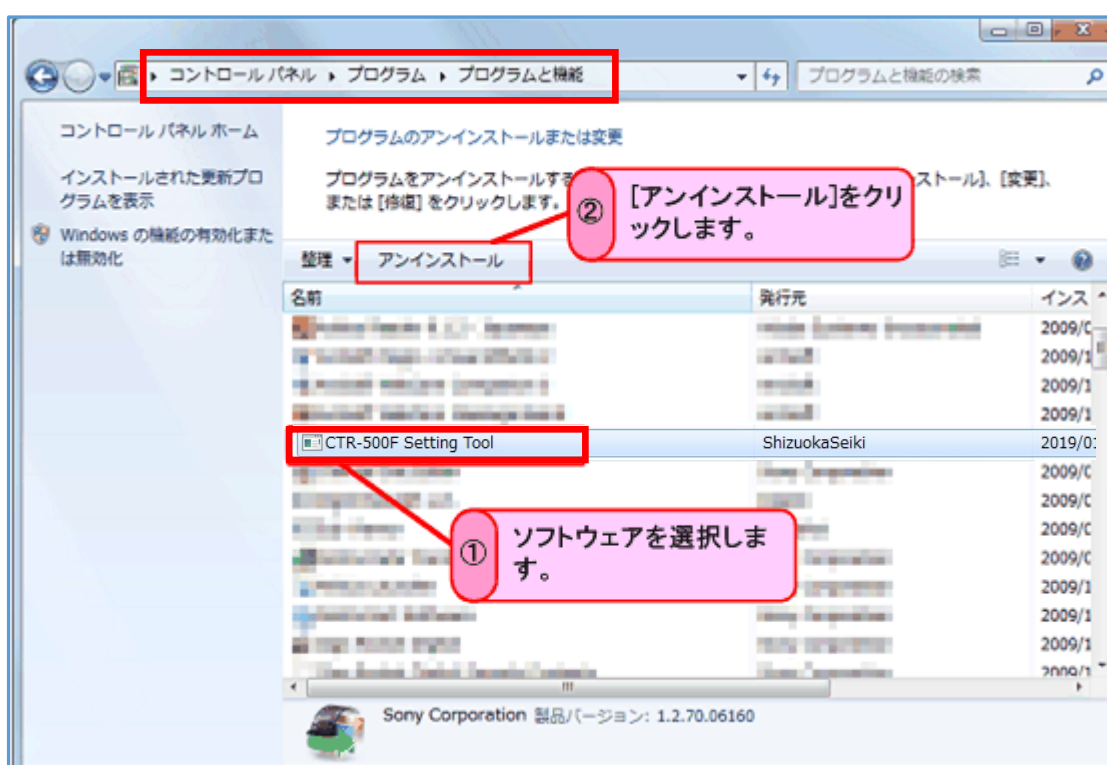
The preparation is now complete.

3-4. Uninstallation of the communication software.

* If you no longer need the communication software, follow the procedure below to uninstall it.

- 1) Select the [Uninstall a program] in the [Programs] on the [Control Panel].
- 2) The [Programs and Features] screen is displayed.

Select the [CTR-500F Setting Tool] and click the [Uninstall].



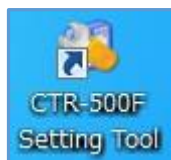
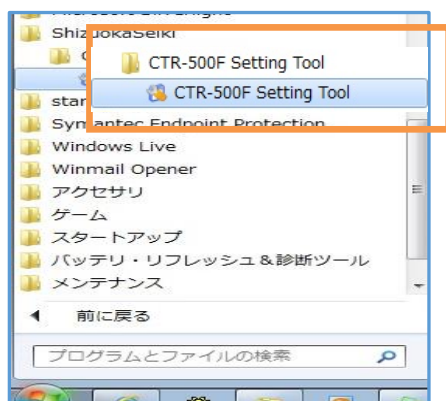
4. Starting of software

1) Connect the CTR-500FE and a personal computer with the communication cable.

After connecting, turn on the power of CTR-500FE.

2) Select [Program] ⇒ [Shizuoka Seiki] ⇒ [CTR-500FE Setting Tool]

⇒ [CTR-500FE Setting Tool] or double-click the created icon on your desktop.

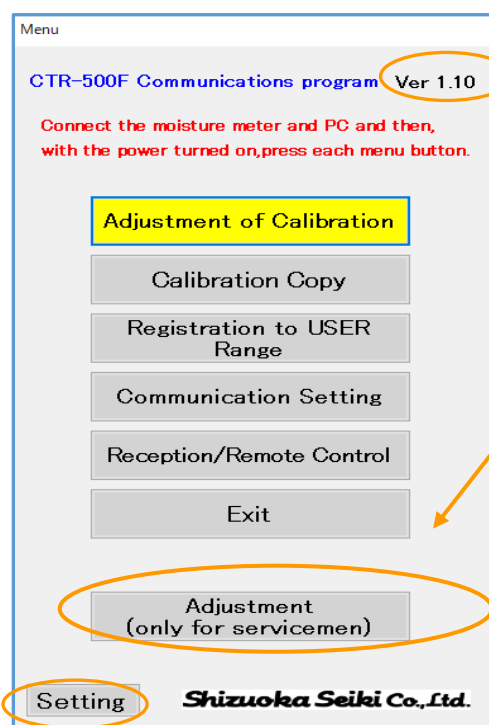


Icon.

3) When the software PC starts, the menu panel is displayed.

When the button of an item to carry out is pushed, it will move to each setting screen.

For details, it explains after the following page.



Version information of the communication software.

This is used only to be adjusted by our serviceman.

You can set the port number to use for communication and displayed language
(The default language is Japanese.)

<About settings>

When you click the setting button, the following [Settings] screen is displayed.

Select the port number to use for communication and the language to display, and click the [OK] button.

Click ▼ and select the displayed language (Japanese/ English).

Setting

Language English ▼

Port No. 3

USB Serial Port (COM3)

OK Cancel

Enter the port number to use for communication.

The list of currently connected ports is displayed.

Click at the end.

In the case of the above screen, since CTR-500FE is connected to (COM3), Enter "3" into the port number.

When the list of connected ports is blank, click the "Cancel" button. Then quit the software once, reconnect the USB cable, and try again from 1).

*This setting can be changed later.

5. Moisture calibration adjustment.

The moisture value can be finely tuned in $\pm 2.0\%$ of range for every grain.

Please use it to unite with other moisture meters.

Setting method

1) CTR-500FE is connected with a personal computer by the communication cable, and CTR-500FE turn on power.


2) Click button of [a shift of a calibration] of menu panel.

3) When the communication is normally performed with CTR-500FE, [shift of calibration] screen starts.

The amount of shifts of each grain set up now (moisture adjustment value) is displayed on a screen.


Adjustment of Calibration

Input the value for the grain to be shifted and then, press the Change button.

1. Brown rice		0.0	%	10. Buckwheat	+	0.0	%
2. White rice	+	0.0	%	11. Reserve	+	0.0	%
3. Paddy	+	0.0	%	12. Standard	+	0.0	%
4. In drying paddy	+	0.0	%	13. USER1	+	0.0	%
5. Wheat	+	0.0	%	14. USER2	+	0.0	%
6. Barley	+	0.0	%	15. USER3	+	0.0	%
7. Wheat2	+	0.0	%	16. Long paddy	+	0.0	%
8. Rye	+	0.0	%	17. Long white rice	+	0.0	%
9. Paddy (high speed mode)	+	0.0	%	18. Long brown rice	+	0.0	%

※ When the error screen is displayed, please refer to the item of 10. Error display.

Communication error

 Communication error. Check the connection and communication settings.

4) The moisture value to shift is set up about grain to adjust.

Example: When you want to give a moisture indication of brown rice low 0.5%

Adjustment of Calibration

Input the value for the grain to be shifted and then, press the Change button.

1. Brown rice	+	▼	0.0	▼	%	10. Buckwheat	+	▼	0.0	▼	%
2. White rice	+	▼	0.0	▼	%	11. Reserve	+	▼	0.0	▼	%
3. Paddy	+	▼	0.1	▼	%	12. Standard	+	▼	0.0	▼	%
4. In drying paddy	+	▼	0.2	▼	%	13. USER1	+	▼	0.0	▼	%
5. Wheat	+	▼	0.3	▼	%	14. USER2	+	▼	0.0	▼	%
6. Barley	+	▼	0.4	▼	%	15. USER3	+	▼	0.0	▼	%
7. Wheat2	+	▼	0.5	▼	%	16. Long paddy	+	▼	0.0	▼	%
8. Rye	+	▼	0.6	▼	%	17. Long white rice	+	▼	0.0	▼	%
9. Paddy (high speed mode)	+	▼	0.7	▼	%	18. Long brown rice	+	▼	0.0	▼	%
			0.8	▼	%						
			0.9	▼	%						
			1.0	▼	%						
			1.1	▼	%						
			1.2	▼	%						
			1.3	▼	%						
			1.4	▼	%						
			1.5	▼	%						
			1.6	▼	%						
			1.7	▼	%						
			1.8	▼	%						
			1.9	▼	%						
			2.0	▼	%						

Change Cancel

Click the ▼ button and select the mark (+, -).
In the case of the example, - is selected.

Click ▼ button and select the quantity to shift.
In the case of the example, 0.5 is selected.

5) When changing about other grain, set up the quantity to shift similarly.

6) When [change] button is pushed, CTR-500E and communication will be performed and the shift of a calibration will be performed.

Click [cancel] button without clicking [change] button to cancel the change work.
It returns to the menu panel, without performing adjustment of moisture value.

※ When it measures the grain which shifted the calibration,
[·] mark is printed after the grain name.

Date 11 Sep. 2020 12:03

0 5 10 20

14.5

Mode = Model

Quantity = 20

Average = 14.4%

STD Deviation = 0.01%

Grain = Brown rice.

Average Temp. = 25.6C

Memo

6. The copy of a calibration

The calibration of each grain can be copied to the range of USER1~USER3.

Setting method

- 1) CTR-500FE is connected with a personal computer by the communication cable, and CTR-500FE is turned on.
- 2) Click the button of [the copy of a calibration] of menu panel (P. 1 1) .
- 3) A [copy of calibration] screen starts.

Copy source	Copy destination	Registered info.
<input checked="" type="radio"/> Brown rice	<input checked="" type="radio"/> USER1	Standard
<input type="radio"/> White rice	<input type="radio"/> USER2	Standard
<input type="radio"/> Paddy	<input type="radio"/> USER3	Standard
<input type="radio"/> In drying paddy		
<input type="radio"/> Wheat		
<input type="radio"/> Barley		
<input type="radio"/> Wheat2		
<input type="radio"/> Rye		
<input type="radio"/> Paddy(high speed mode)		
<input type="radio"/> Buckwheat		
<input type="radio"/> Reserve		
<input type="radio"/> Standard		
<input type="radio"/> Long paddy		
<input type="radio"/> Long white rice		
<input type="radio"/> Long brown rice		

- 4) Select the grain to copy from the copy source.
- 5) Select whether it copies to the range of USER1~3, and click the[Execute] button. CTR-500FE and communication are performed and a copy is carried out.

In the case of the upper screen, a brown rice range is copied to USER1, and when USER1 is selected and measured, the same moisture value as brown rice is displayed.

Please click [Cancellation] button, when you cancel the work of a copy.

※ The information of fine adjustment of water content is not copied.

7. Registration to USER range

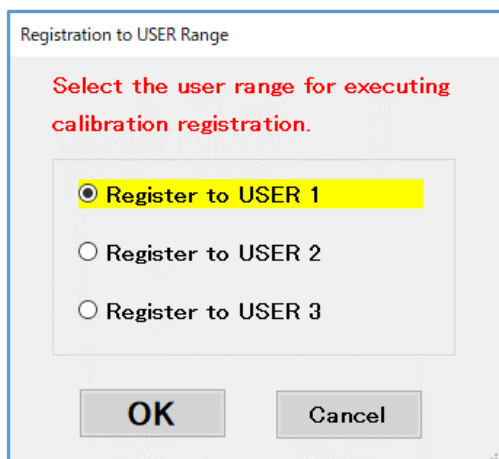
Your own can be registered into the range of between USER1 and USER3.

Please refer to the "creation method of a user calibration" (P. 19)
of the separate instructions manual about the creation method of a calibration.

***Please use the created calibration curves with your responsibility.**

Setting method

- 1) CTR-500FE is connected with a personal computer by the communication cable,
and CTR-500F is turned on.
- 2) Click the [Register to user range] button on the menu screen.
- 3) [Registration to USER range] screen starts.



Registration to USER Range

Select the user range for executing calibration registration.

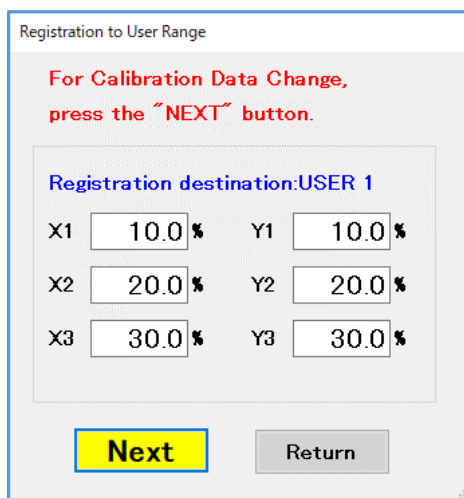
☒ Register to USER 1

☐ Register to USER 2

☐ Register to USER 3

OK Cancel

- 4) Select the USER range to register and click the [OK] button.
Click the [Cancel] button when stop working.
- 5) The current setting value is displayed. Click the [Next] button.
Click the [Return] button when stop working.



Registration to User Range

For Calibration Data Change,
press the "NEXT" button.

Registration destination: USER 1

X1	10.0 %	Y1	10.0 %
X2	20.0 %	Y2	20.0 %
X3	30.0 %	Y3	30.0 %

Next Return

- 6) The screen for creating the calibration curve is displayed.
(Calibration curve creation function)

Registration to User Range

File

Input the standard and measured values and then, press the Start calculation button.
After the calibration curve data calculation, press the Register button.

Registration destination: USER 1

No	Target value	CTR-500F measured value	Predicted value
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			

$y1 = ax1 + b$

a = (slope)
b = (bias)

X1 = 10.0% Y1 = 10.0%
X2 = 20.0% Y2 = 20.0%
X3 = 30.0% Y3 = 30.0%

☐ Use the change point for X2.

Start calculation Clear screen Register Return

Comparison of CTR-500F and target values
(Before calibration registration)

Comparison of CTR-500F and target values
(After calibration registration)

- 7) Enter the target value and the measured value of CTR-500FE.
(The number of data: 15 points or more)

Target value: If the moisture content is known, enter its value.

If you require to match it with your existing moisture meter,
enter the measured value of that moisture meter.

CTR-500FE Measured Value: Enter the value measured in the “reference” range for each sample.

Registration to User Range

File

Input the standard and measured values and then, press the Start calculation button.
After the calibration curve data calculation, press the Register button.

Registration destination: USER 1

No	Target value	CTR-500F measured value	Predicted value
1	10.3	15.3	
2	18.7	23.7	
3	20.5	25.5	
4	14.4	19.4	
5	14.9	19.9	
6	16.1	21.1	
7	22.0	27.0	
8	11.2	16.2	
9	18.3	23.3	
10	17.9	22.9	
11	21.4	26.4	
12	20.1	25.1	
13	15.0	20.0	
14	12.6	17.6	
15	19.4	24.4	

$y1 = ax1 + b$

a = (slope)
b = (bias)

X1 = 10.0% Y1 = 10.0%
X2 = 20.0% Y2 = 20.0%
X3 = 30.0% Y3 = 30.0%

☐ Use the change point for X2.

Start calculation Clear screen Register Return

Comparison of CTR-500F and target values
(Before calibration registration)

Comparison of CTR-500F and target values
(After calibration registration)

Clear the entered value.

Return to the previous screen.

8) Click the [Start Calculation] button.

A calibration curve is created.

The predicted value of the measurement result of CTR-500FE is displayed, in case that the calibration is used.

In the example below, the CTR-500FE's measured value which is higher about 5%, results in the value close to the target value by using the calibration curve that was created.

Registration to User Range

File

Input the standard and measured values and then, press the Start calculation button.
After the calibration curve data calculation, press the Register button.

Registration destination: USER 1

No	Target value	CTR-500F measured value	Predicted value
1	10.3	15.3	10.3
2	18.7	23.7	18.7
3	20.5	25.5	20.5
4	14.4	19.4	14.4
5	14.9	19.9	14.9
6	16.1	21.1	16.1
7	22.0	27.0	22.0
8	11.2	16.2	11.2
9	18.3	23.3	18.3
10	17.9	22.9	17.9
11	21.4	26.4	21.4
12	20.1	25.1	20.1
13	15.0	20.0	15.0
14	12.6	17.6	12.6
15	19.4	24.4	19.4

$y1 = ax1 + b$
a = 1.0000 (slope)
b = -5.0000 (bias)

X1 = 10.0% Y1 = 5.0%
X2 = 20.0% Y2 = 15.0%
X3 = 30.0% Y3 = 25.0%
☐ Use the change point for X2.

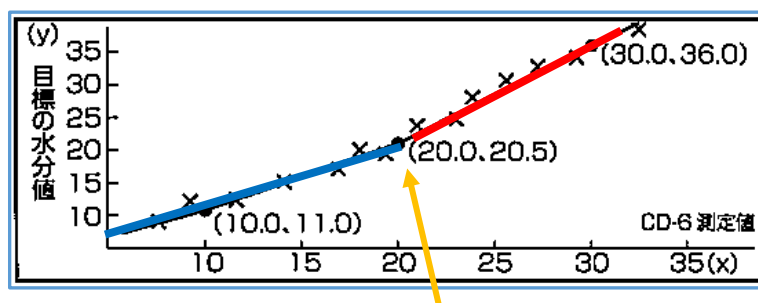
Start calculation Clear screen Register Return

Graph before creating the calibration curve.

Simulation result of created calibration curve.

<About the "Use the change point for X2" check box>

If graph that the target and the measurement values by CTR500FE are plotted is not straight line, activate this check box.

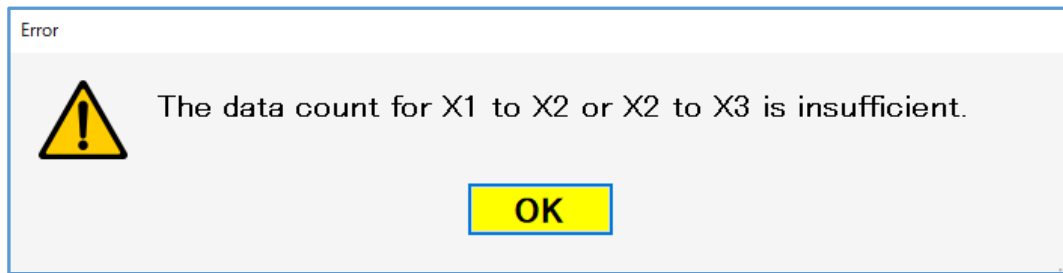


You can create a more accurate calibration curve by entering the value of X2 with the checkbox checked.

In the graph above, the slope of the graph changes at the position of 20.0%, So, after entering 20.0 to X2, click the [Start Calculation] button.

When the error of the below appears, there is insufficient data to create the calibration curve. Since there is no data between X1 and X2 or between X2 and X3, it cannot be calculated.

Add the data and try again.



- 9) When registering the created calibration curve in the CTR-500FE, make sure the power source of the CTR-500FE is on and click the [Register] button.
(If the power source of CTR-500FE is off, turn it on.)

The calibration curve is registered by communicating with CTR-500FE.
To cancel the registration, click the [Back] button.

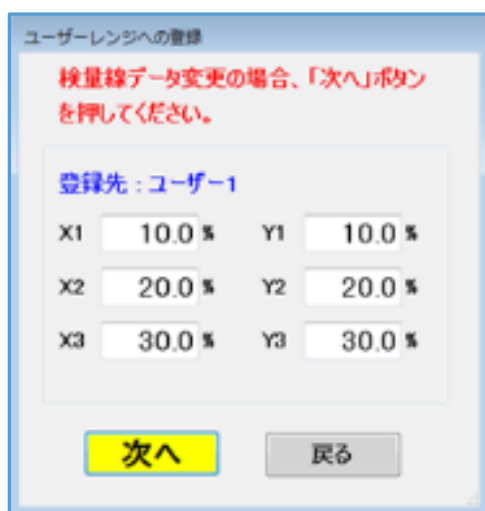
<When not using the creating function of the calibration curve.>

Your own values of X1 to X3 and Y1 to Y3 can be registered without using the creating function of the calibration curve.

X: Measured value by CTR-500FE (Enter under the condition of $X1 < X2 < X3$)

Y: Target value (Enter under the condition of $Y1 < Y2 < Y3$)

In that case, click the [Next] button after entering the value in the frame below, and click the [Register] button on the next screen.

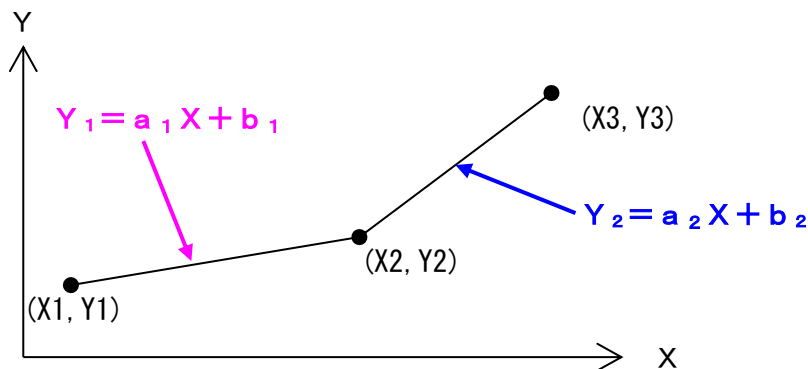
A screenshot of a software window titled "ユーザーレンジへの登録" (Registration to User Range). Inside the window, there is a red instruction: "検量線データ変更の場合、「次へ」ボタンを押してください。" (In the case of changing the calibration curve data, please press the "Next" button). Below this, it says "登録先: ユーザー1" (Registration destination: User 1). There are two columns of input fields. The left column is for X values: X1 (10.0 %), X2 (20.0 %), and X3 (30.0 %). The right column is for Y values: Y1 (10.0 %), Y2 (20.0 %), and Y3 (30.0 %). At the bottom, there are two buttons: a yellow "次へ" (Next) button and a grey "戻る" (Back) button.

The supplement 1 about a user calibration.

The value of Y turns into a target value of how to want to display the value (measured value of CTR-500FE) of X.

The moisture display is converted in the following formula.

For example, $X_1:10.0$, $X_2:20.0$, $X_3:25.0$,
 $Y_1:12.0$, $Y_2:22.0$, and $Y_3:30.0$ When it inputs



The value of each inclination and section can be calculated by the lower formula.

$$a_1 = (Y_2 - Y_1) / (X_2 - X_1) \quad , \quad b_1 = Y_2 - a_1 * X_2$$

$$a_2 = (Y_3 - Y_2) / (X_3 - X_2) \quad , \quad b_2 = Y_3 - a_2 * X_3$$

In the case of an example, it is set to $Y_1 = X + 2$ from $a_1 = 1.0$ and $b_1 = 2$.

Moreover, it is set to $Y_2 = 1.6X - 10$ from $a_2 = 1.6$ and $b_1 = -10$.

When the value of X is below a value of X_2 , the value calculated in the formula of Y_1 is displayed.

When the value of X is larger than the value of X_2 , the value calculated in the formula of Y_2 is displayed.

In the case of an example, what was displayed as 10.0% until now came to be displayed as 12.0% from $Y_1 = 10.0 + 2 = 12.0$, and was displayed as 25.0% comes to be displayed as 30.0% from $Y_2 = 1.6 * 25.0 - 10 = 30.0$.

• The supplement 2 about a user calibration

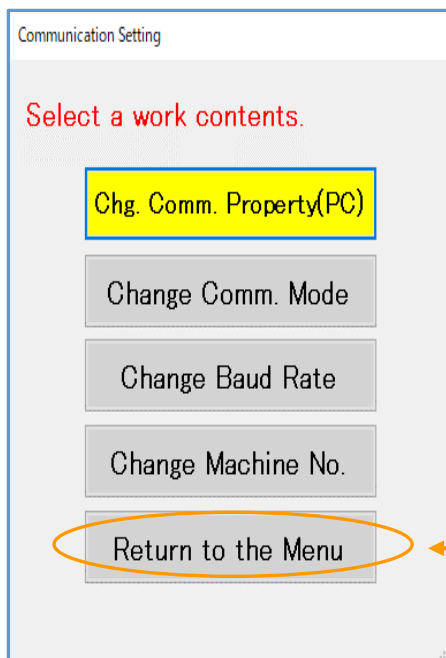
By the copy of a calibration, when the calibration of other grain is beforehand copied to the USER range, it is calculated by the calibration created after computing a moisture value by the copied grain.

*Please use the created calibration curves with your responsibility.

8. Communication settings

Various kinds of communication properties can be set up.

Please click the item of hope from a/the setting of communication screen.



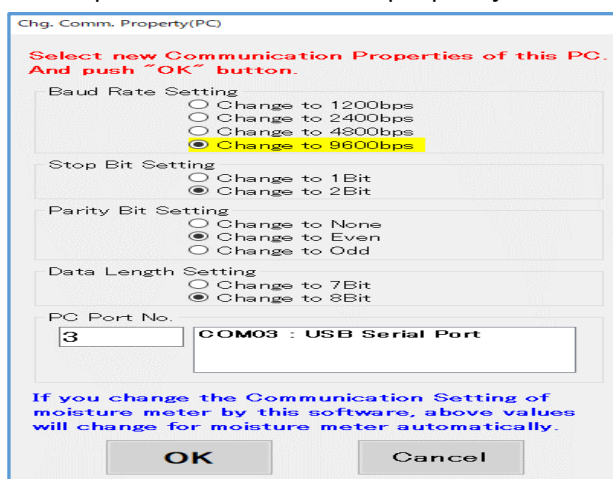
Click this, when you return to the menu.

8 – 1. Change of the communication property for PC

The communication property of a personal computer can be changed.

Setting method

- 1) Click [Change of a communication property (PC)] button from a [connection setting] screen.
- 2) Set up the communication property and click the [O.K.] button.



※1 In order to communicate with CTR-500FE, it is necessary to unite the communication property by the side of CTR-500FE and a personal computer.

The communication property of CTR-500E is determined by the communication mode and the baud rate which are chosen.

Communication mode	Baud rate	Data length	Parity	Stop bit
Mode A, B, C	The value chosen by CTR-500FE	8	None	1
Mode D		7	Even	1
Mode E		8	Even	2

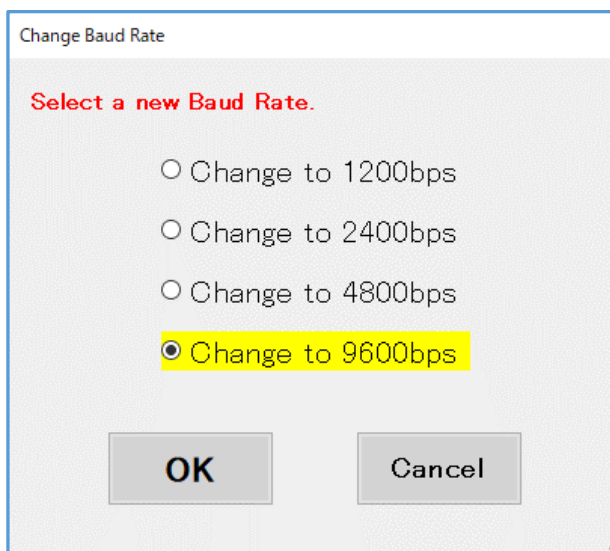
※2 When the communication mode of CTR-500E is changed from a personal computer (8-2 reference), the communication property by the side of a personal computer changes to a setup in each above-mentioned mode automatically.

8 – 2. Change in communication mode

Communication mode of CTR-500E can be changed.

Setting method

- 1) CTR-500E is connected with a personal computer by the communication cable, and CTR-500E is turned on.
- 2) Click [Change of communication mode] button from a [communicative setting] screen.
- 3) [Change of communication mode] screen starts.
Click the [O.K.] button after selecting the mode to change.



Click [Cancel] button when not changing.

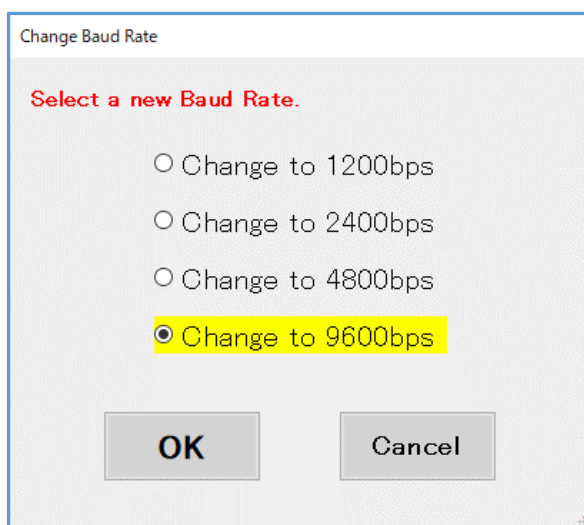
※ When the mode is changed, please reboot on the power supply of a moisture meter.
The changed setup does not become effective unless it reboot on a power supply.
If you make a mistake in setting the mode, set the correct mode and then measure again.

8 – 3. Change of a baud rate

The communication baud rate of CTR-500FE can be changed.

Setting method

- 1) CTR-500FE is connected with a personal computer by the communication cable, and CTR-500FE is turned on.
- 2) Click [Change of baud rate] button from a [communicative setting] screen.
- 3) [Change of baud rate] screen starts.
Click The [O.K.] button after selecting a baud rate to change.



Click [Cancellation] button when not changing.

※ When a baud rate is changed, please reboot on the power supply of a moisture meter.

The changed setup does not become effective unless it reboot on a power supply.

8 – 4. Change of a devices number

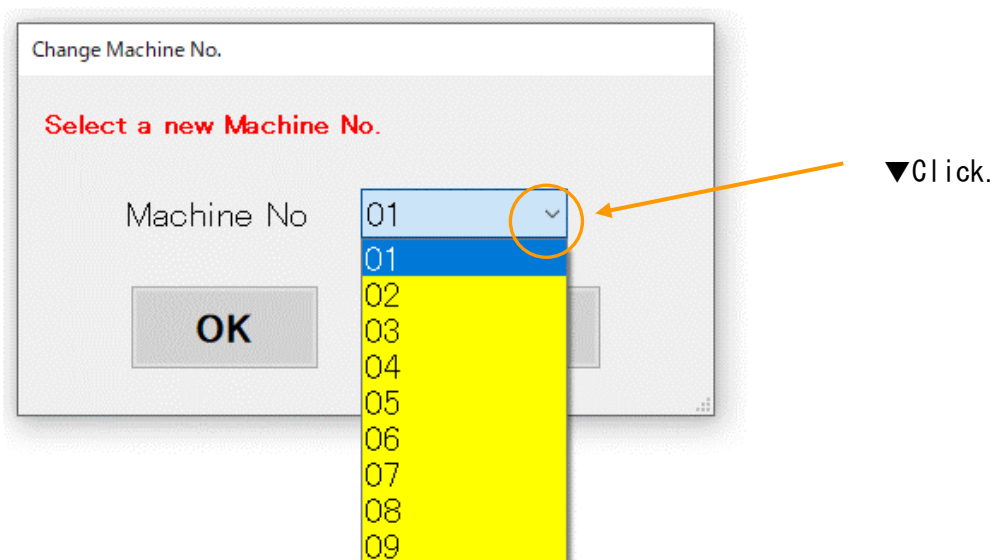
The devices number used in the mode E of CTR-500FE can be changed.

The devices number can be set up to 01-09.

Setting method

- 1) CTR-500E is connected with a personal computer by the communication cable, and CTR-500FE is turned on.
- 2) Click [Change of devices number] button is clicked from a [communicative setting] screen.
- 3) [Change of devices number] screen starts.

The devices number set up now is displayed on a screen.



Click the [O.K.] button after selecting a devices number to change.

Click [Cancellation] button when not changing.

9.Reception of a measurement result/Remote control.

According to the communication mode set up by CTR-500FE,
a measurement result can be received or it can operate by remote control.

- 1) CTR-500FE is connected with a personal computer by the communication cable, and CTR-500E is turned on.
- 2) Click [Reception of a measurement result / remote control] button from a [menu] screen.

The screen boot up according to the communication mode by current setting.

Beforehand, please change into the communication mode to wish.

(P. 2 2 8-2 reference)

9-1 Mode A

The measurement result (single grain data) sent from CTR-500FE is receivable.

When Mode A is chosen in CTR-500FE, a lower data receiving screen starts automatically.

No.	Moisture[%]
002	12.7
003	12.5
004	13.1
005	14.2
006	14.3
007	12.6
008	15.1
009	13.7
010	12.8
011	12.7
012	13.4
013	13.2
014	13.8
015	12.8
016	12.6
017	13.4
018	13.1
019	13.7
020	13.3
021	13.4
022	12.5
023	13.1
024	12.1
025	####

The received data can be saved by CSV form.

The single grain data sent from the moisture meter is displayed.
The out of measurement range will be "####".

Receipt of program will be end.

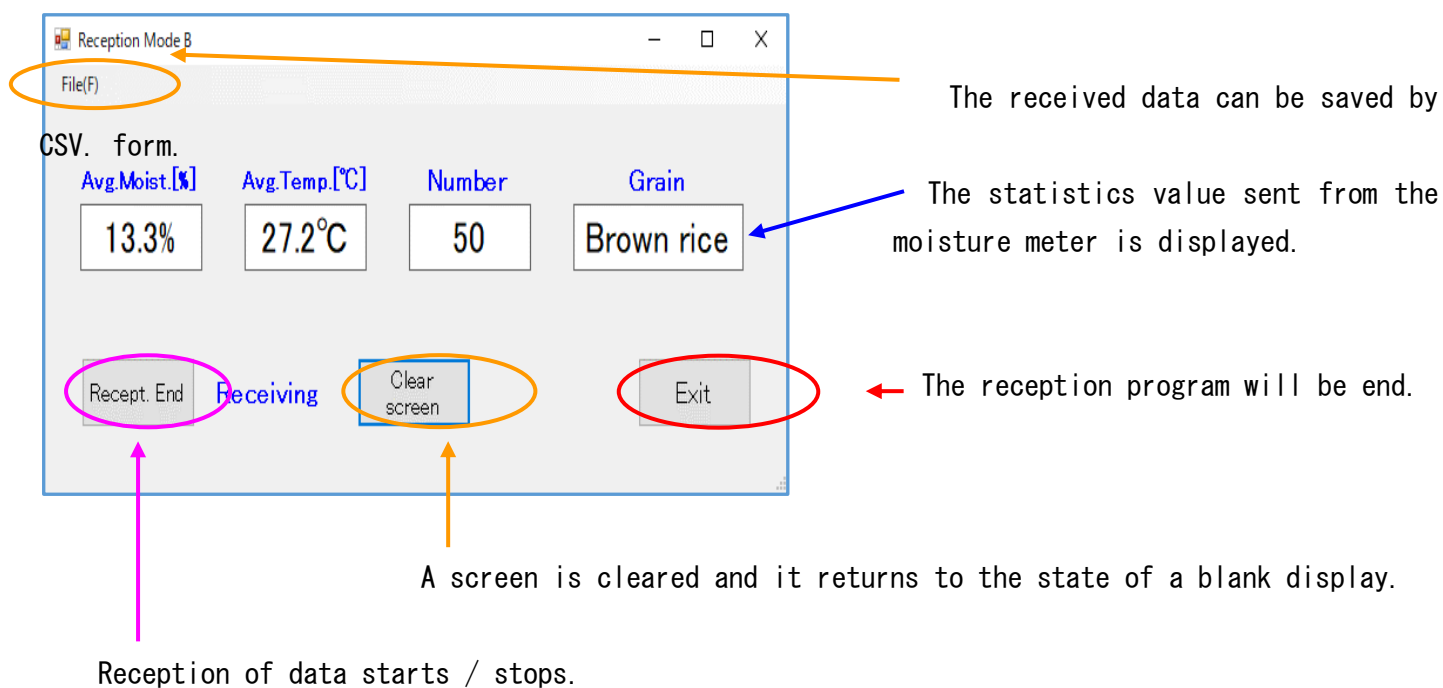
A screen is cleared and it returns to the state of a blank display.

Reception of data starts / stops.

9 – 2 Mode B

The measurement result (statistics value data) sent from CTR-500FE is receivable.

When Mode B is chosen in CTR-500FE, a lower data receiving screen starts automatically.



9-3 Mode C

The measurement result (single grain data + statistics value data) sent from CTR-500FE is receivable.

When Mode C is chosen in CTR-500FE, a lower data receiving screen starts automatically.

The received data can be saved by CSV form.

Reception Mode C
File(F)

No.	Moisture[%]	Temp.[°C]	Pulse Width[ms]
031	12.6	27.2	244
032	13.4	27.2	466
033	12.9	27.2	358
034	13.2	27.1	414
035	12.5	27.2	392
036	13.2	27.2	748
037	13.6	27.1	782
038	13.0	27.2	339
039	13.8	27.2	548
040	13.3	27.1	365
041	12.9	27.2	396
042	14.0	27.2	589
043	13.2	27.1	409
044	14.1	27.2	688
045	14.4	27.1	408
046	13.1	27.1	394
047	13.2	27.2	268
048	14.2	27.1	365
049	14.4	27.1	393
050	11.7	27.1	277

Avg. Moist.[%] 13.0% **Avg. Temp.[°C]** 27.1°C **Number** 50 **Grain** Brown rice

Recept. End Receiving Clear screen Exit

Annotations:

- The received data can be saved by CSV form. (points to File(F))
- The single grain data sent from the moisture meter is displayed. (points to the data table)
- The statistics value sent from the moisture meter is displayed. (points to the summary statistics)
- Reception program will be end. (points to Exit)
- A screen is cleared and it returns to the state of a blank display. (points to Clear screen)
- Reception of data starts / Stops. (points to Recept. End)

9-4 Mode D

One set of CTR-500FE can be operated by remote control from a personal computer.

When Mode D is chosen in CTR-500FE, a lower data receiving screen starts automatically.

Remote Control Mode D

File(F)

No.	Moisture[%]	Temp.[°C]	Pulse Width[ms]
032	13.5	26.8	434
033	13.1	26.8	344
034	13.3	26.8	395
035	14.0	26.8	398
036	13.4	26.8	427
037	13.7	26.8	823
038	13.5	26.8	542
039	13.5	26.8	292
040	13.5	26.8	790
041	13.0	26.8	371
042	13.4	26.8	375
043	12.7	26.8	417
044	12.8	26.8	363
045	12.0	26.8	392
046	14.2	26.8	361
047	13.0	26.8	313
048	13.4	26.8	273
049	13.0	26.8	327
050	12.6	26.7	341
051	*		

Avg. Moist. [%] 13.0 Avg. Temp. [°C] 26.8 Number 50

Measure. Start Measure. End

Clear screen Exit

The received data can be saved by CSV form.

The single grain data sent from the moisture meter is displayed.

The statistics value sent from the moisture meter is displayed.

A measurement end command is sent to a moisture meter.

A remote control program will be end.

A screen is cleared and it returns to the state of a blank display.

A measurement start command is transmitted to the moisture meter.

* Measurement start button] changes to the display "under measurement" during measurement.

Measuring

Measure. End

Clear screen

Exit

9-5 Mode E

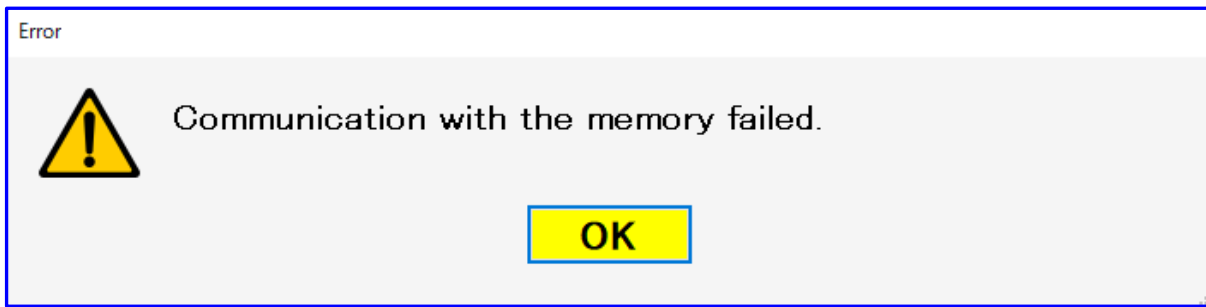
By using a multi-channel multiplexer etc., a maximum of nine set of CTR-500FE can be operated by remote control from a personal computer.

The screenshot shows a software window titled "Remote Control Mode E". At the top, there is a menu bar with "File(F)" and "Port Setting(P)". Below the menu bar, a "Comm. Mode" dropdown menu is set to "USB". The main area of the window contains nine panels, each representing a machine. The panels are arranged in two rows: the first row has five panels (Machine No. 01 to 05) and the second row has four panels (Machine No. 06 to 09). Each panel has a title "Machine No. [Number]" in green, followed by "Avg. Moist. [%]" in blue. Below this is a white rectangular display showing "0%". At the bottom of each panel are two grey buttons: "Measure. Start" and "Measure. End". At the very bottom of the window, there are two additional grey buttons: "Clear screen" on the left and "Exit" on the right.

Machine No.	Avg. Moist. [%]	Measure. Start	Measure. End
Machine No. 01	0%	Measure. Start	Measure. End
Machine No. 02	0%	Measure. Start	Measure. End
Machine No. 03	0%	Measure. Start	Measure. End
Machine No. 04	0%	Measure. Start	Measure. End
Machine No. 05	0%	Measure. Start	Measure. End
Machine No. 06	0%	Measure. Start	Measure. End
Machine No. 07	0%	Measure. Start	Measure. End
Machine No. 08	0%	Measure. Start	Measure. End
Machine No. 09	0%	Measure. Start	Measure. End

Clear screen Exit

10. Error display



<Cause>

Communication is impossible between a moisture meter and a personal computer.
Communication with IC on a circuit board went wrong.

<Confirmation and treatment method>

- The cable is connected correctly is confirmed.
- The RS-232 C cable that is using it confirms that is "reverse".
"In straight" it is not able to communicate.
- Check that the power of a moisture meter is contained.
- That the baud rate (the communication speed) of a moisture total and personal computer are fitting is confirmed.
- The baud rate on the side of a personal computer: the item references of the setting (PC) of 8-1 communication properties.
The baud rate on the side of a moisture meter is refer to (P28) the operation manual of a separate volume.
- It should be confirm that the communication property of a moisture meter and personal computer are fitting together.
The communication property on the side of a personal computer: the item references of the setting (PC) of 8-1 communication properties.
Communication property on the side of a moisture meter refer to (P23) the operation manual of a separate volume. and the forwarding condition (P23).
- After changing the communication mode and the baud rate of a moisture meter, the power supply of a moisture meter is not reboot.
- The setup will not become effective once it does not turn off the power.
- Turning on the power supply again it confirms once again.
- Trying reboot your computer.

If it does not solve the matter when the above-mentioned checked,
please request repairing to the dealer, or Shizuoka Seiki Co., Ltd

07334-207003

