





**ELECTRO ELECTRIC SYSTEMS**



**>> HiMS for  
N100plus Inverter**

# C O N T E N T S

-  **1 Major features of HiMS2000**
-  **2 Equipment for using HiMS2000 S/W**
-  **3 Connection Diagram**
-  **4 Operating**



1

## Major features of HiMS2000

✓ **HiMS** is an initial letter for

**H**yundai **i**nverter **M**anagement **S**ystem.

✓ It is possible to

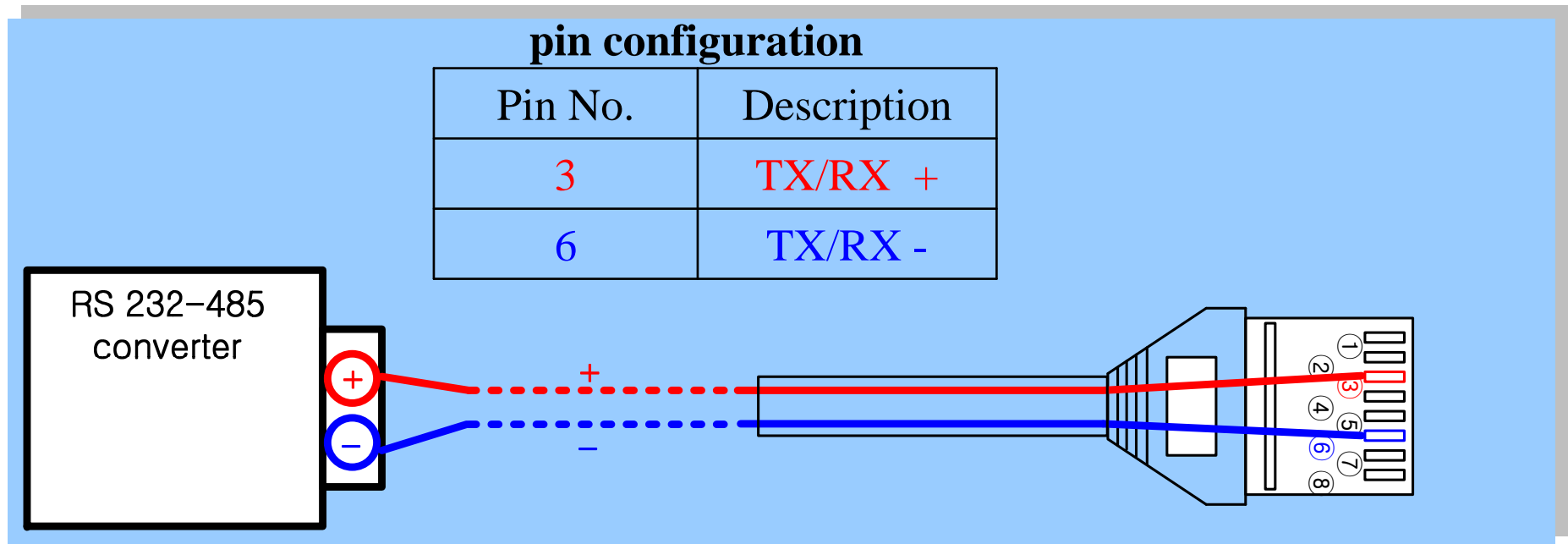
- control inverter-motor driving system on your laptop.
- observe inverter-motor driving system on your laptop.
- change or check inverter parameters on your laptop.
- watch the waveform inverter-motor driving system.
- simulate some applications.



2

Equipment for using HiMS2000 S/W

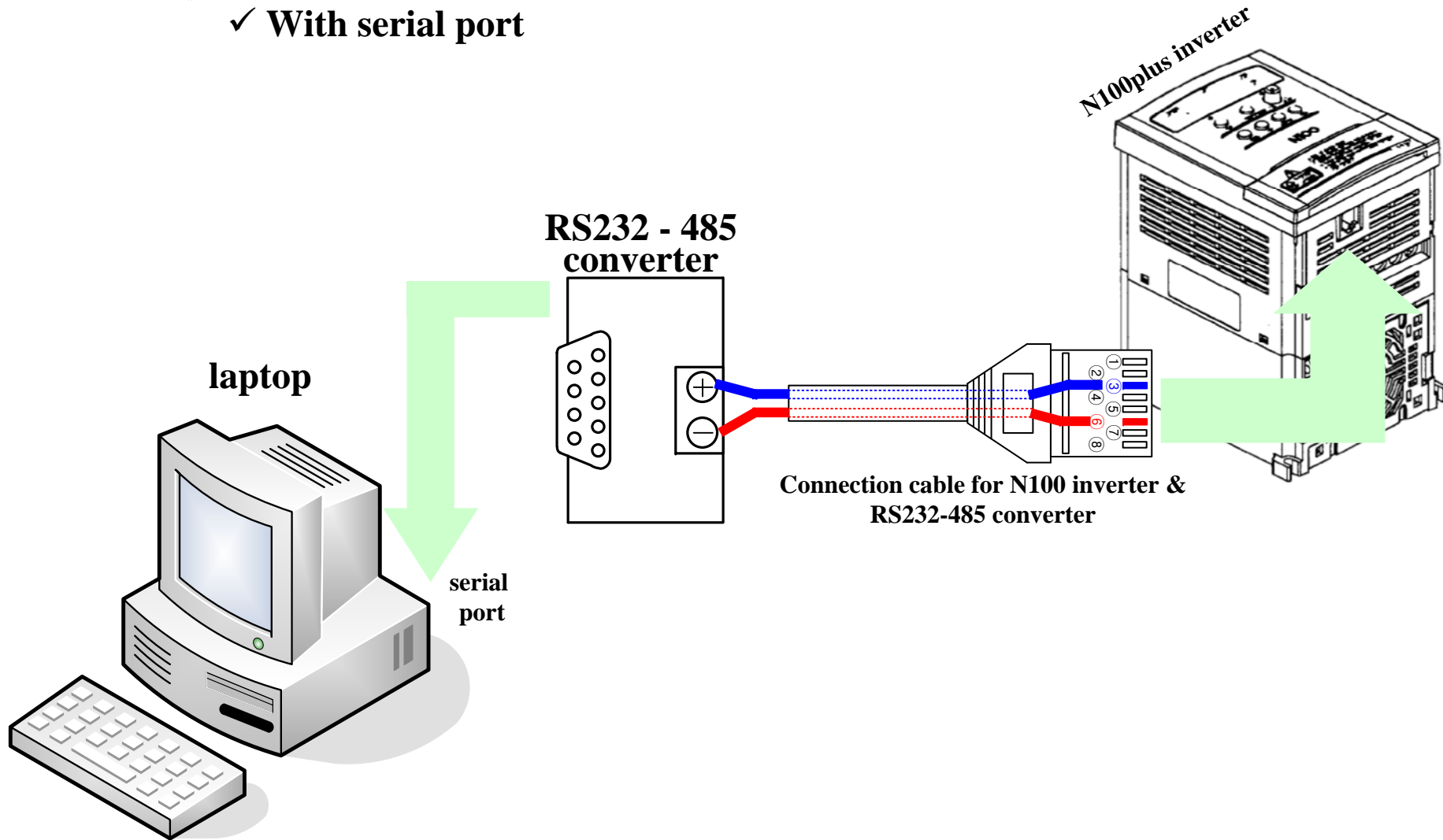
1. N100plus inverter
2. Laptop
3. converter for RS 232-485 communication
4. connection cable



3

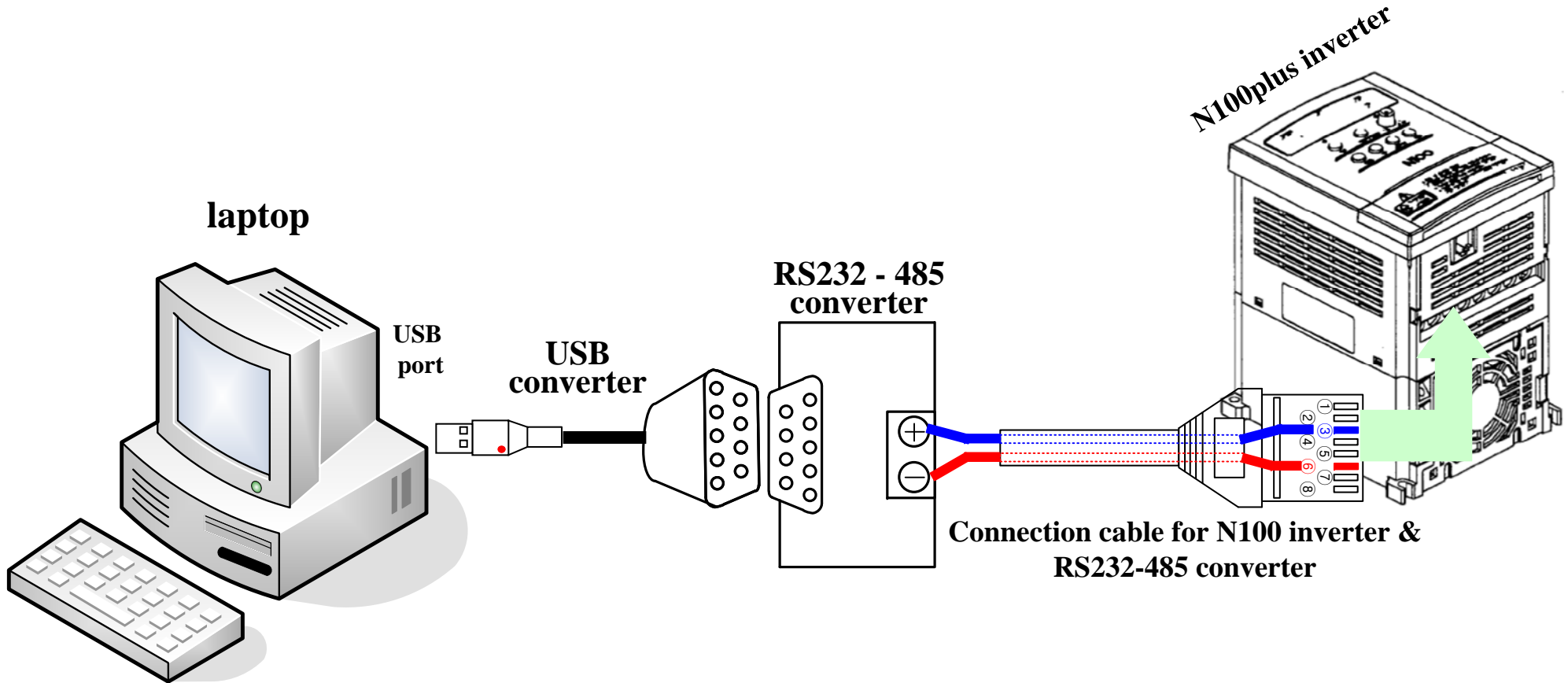
**Connection Diagram**

✓ With serial port



## ✓ With USB port

In this case, another converter (USB-serial converter) is needed.

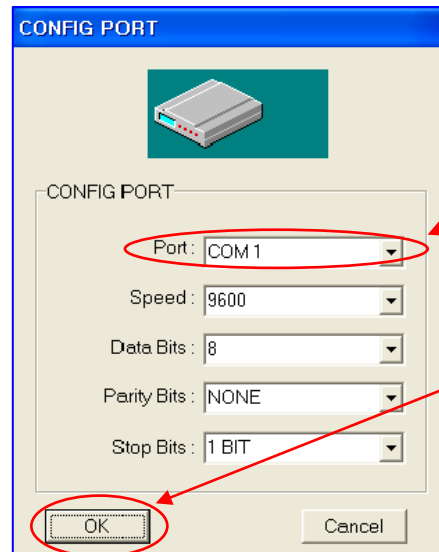


4

## Operating

### 4.1. starting HiMS

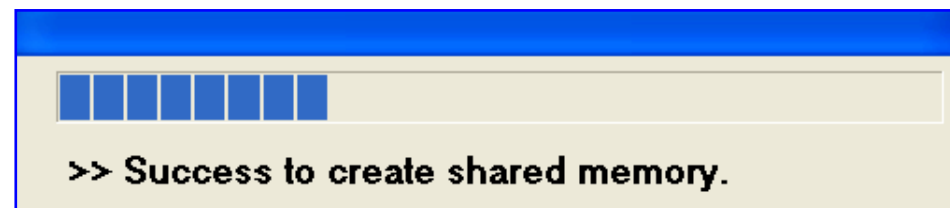
- ✓ start HiMS2000 S/W
- ✓ set the com port (com1 or com2) ; Please check your computer
- ✓ Click the “OK” button



Check your COM port

After setting the com port  
click “OK” button

- ✓ after click the “OK” button, you can see the following message.



## 4.2. basic screen

HIMS2000 - N100E

Setup Parameter Drive Monitor Simulator Help

N100 #1 Tx Rx

Monitor N100 status

initial screen  
operating screen  
parameter  
auto tuning  
waveform  
trip  
monitoring  
up-load  
down-load  
compare  
communication status

Power [W]	Voltage [V]	Current [A]	DC Link V [V]	Frequency [Hz]	Direction	Inverter Status
0.0	0	0.0	288	0.00	STOP	Normal

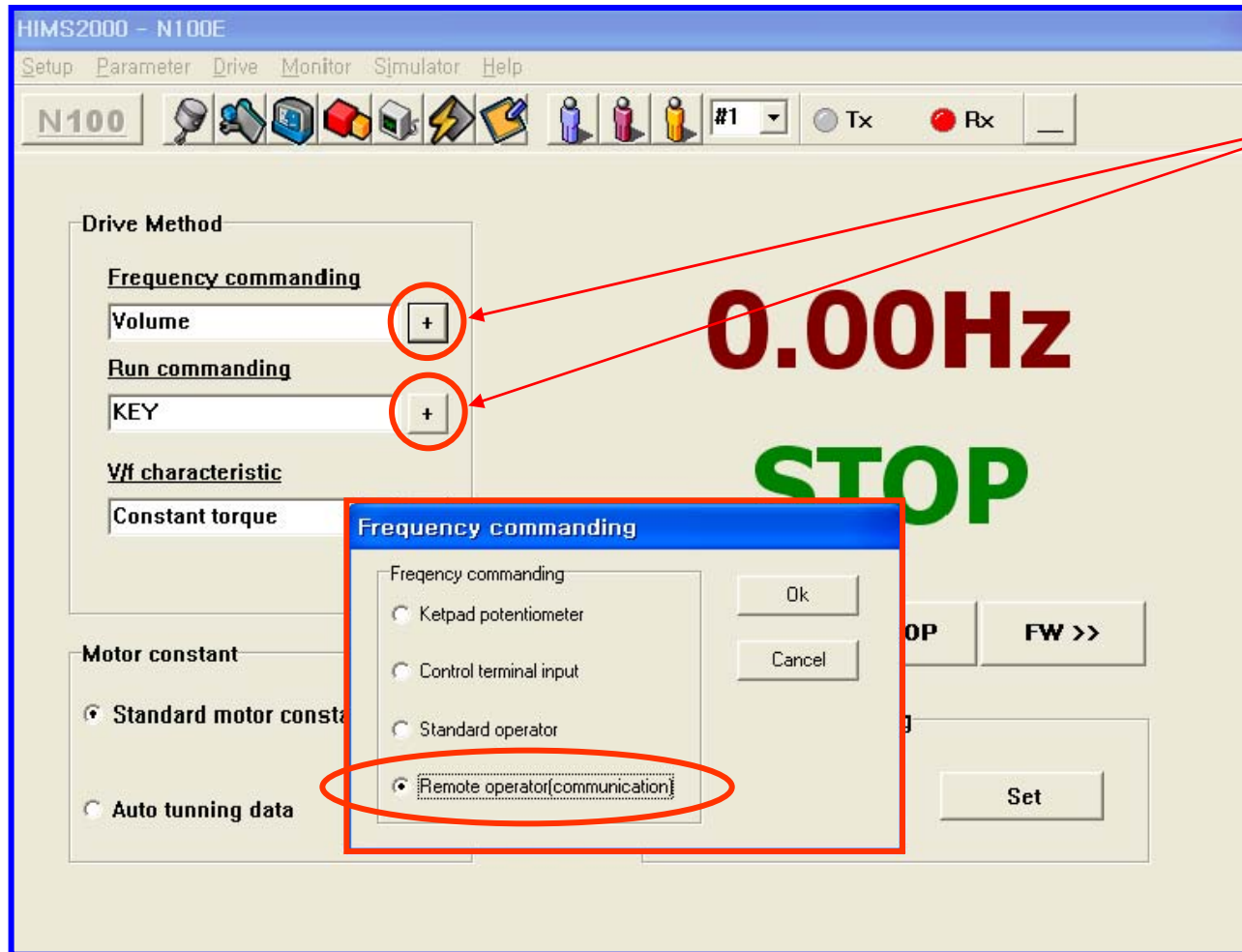
display system information

display current  
inverter status



### 4.3. operating screen

- ✓ operating screen of HiMS2000 (1)
  - . Set Frequency commanding & Run commanding



Set the frequency commanding & run commanding using “+” button



- ✓ operating screen of HiMS2000 (2)
- . Set frequency and rotating direction

The screenshot displays the HiMS2000 - N100E software interface. The main display area shows the current rotating frequency as **60.00Hz** in red and the rotating direction as **FW** in green. Below this, there are three buttons: **<< REW**, **|| STOP**, and **FW >>**. At the bottom, the **Output frequency Setting** section shows a value of **60.00** and a **Set** button. On the left side, there are three control panels: **Drive Method** (with **Frequency commanding**, **Run commanding**, and **V/f characteristic** sections), and **Motor constant** (with **Standard motor constant** and **Auto tuning data** options). Red circles and arrows highlight the **60.00Hz** display, the **FW >>** button, and the **60.00** input field.

display current rotating frequency & direction

set rotating direction

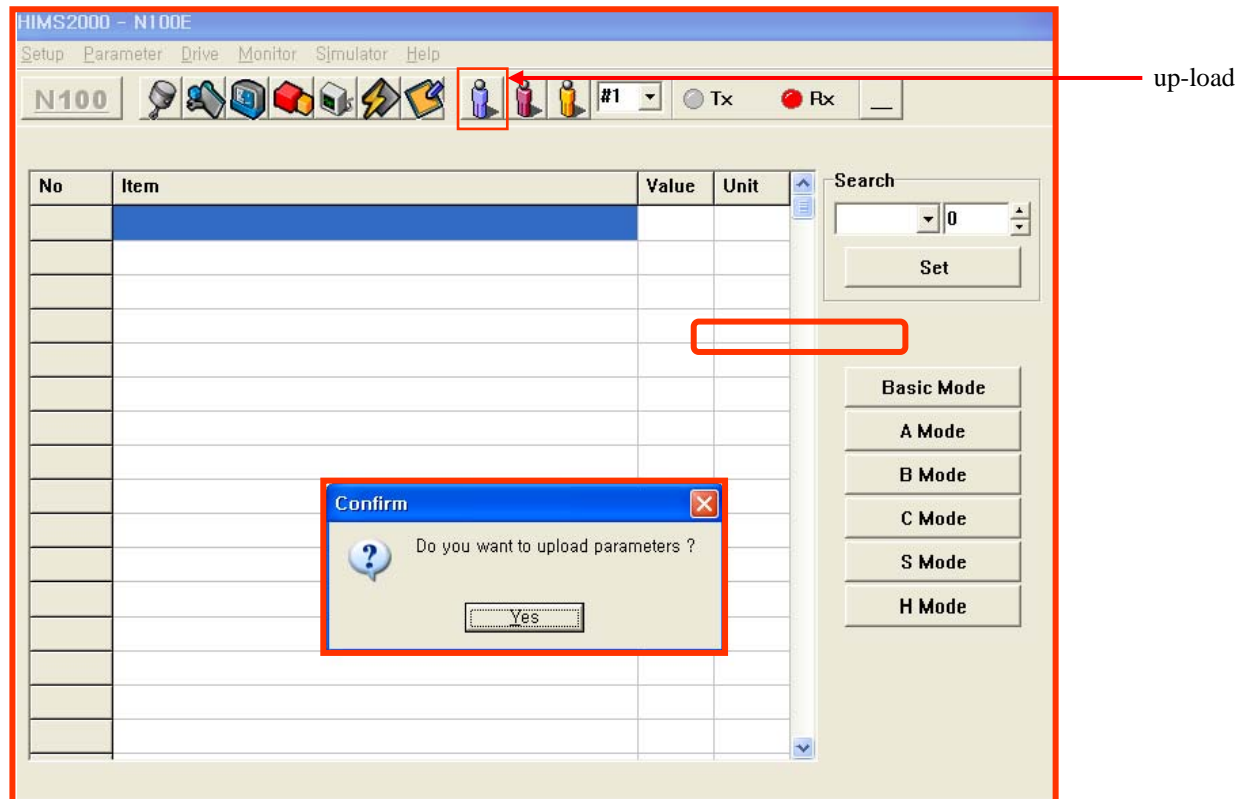
set frequency command



## 4.4. parameter screen

✓ up-load parameter

-. up-load parameter : all of the inverter parameter is uploaded to the laptop



✓ change the setting value

HIMS2000 - N100E

Setup Parameter Drive Monitor Simulator Help

N100 #1 Tx Rx

No	Item	Value	Unit
30	Manual torque boost frequency setting	10.0	%
31	V/F characteristic curve selection	0	-
32	Output voltage gain setting	100.0	%
33	DC braking function selection	V/F characteristic curve selection	
34	DC braking frequency setting	2	
35	DC braking output delay		
36	DC braking force setting		
37	DC braking time setting		
38	Frequency upper limit setting		
39	Frequency lower limit setting	0.00	Hz
40	Jump frequency setting 1	0.00	Hz
41	Jump frequency band-width setting 1	0.00	Hz
42	Jump frequency setting 2	0.00	Hz
43	Jump frequency band-width setting 2	0.00	Hz
44	Jump frequency setting 3	0.00	Hz
45	Jump frequency band-width setting 3	0.00	Hz

Search: EXT-A 31 Set

Basic Mode  
A Mode  
B Mode  
C Mode  
S Mode  
H Mode

Min: 0  
Max: 2  
Base: 0

parameter description

setting value

parameter setting range & factory setting value

✓ save parameter

-. save parameter : You can save all of the inverter parameter in your laptop.

The image shows two overlapping screenshots of the HIMS2000 - N100E software interface. The top screenshot shows the 'Save File' option highlighted in the 'File' menu, with a red arrow pointing to it and the text 'save parameter'. The bottom screenshot shows a file save dialog box titled '다른 이름으로 저장' (Save with name) with a red box around the file name field containing 'crane No 2,n100' and a red arrow pointing to it with the text 'file name'. The background of the bottom screenshot shows a parameter table with columns 'No', 'Item', 'Value', and 'Unit'.

No	Item	Value	Unit
30	Manual torque boost frequency setting	10.0	%
31	V/F characteristic curve selection	0	-
32	Output voltage gain setting	100.0	%
33	DC braking function selection	0	-
34	DC braking frequency setting	0.50	Hz
35	DC braking output delay time setting		
36	DC braking force setting		
37	DC braking time setting		
38	Frequency upper limit setting		
39	Frequency lower limit setting		
40	Jump frequency setting 1		
41	Jump frequency band-width setting		
42	Jump frequency setting 2		
43	Jump frequency band-width setting		
44	Jump frequency setting 3		
45	Jump frequency band-width setting		

✓ download parameter

- . download parameter : all of the inverter parameter is downloaded to the inverter

- . In case of exchanging inverters, you can do it at once with this function.

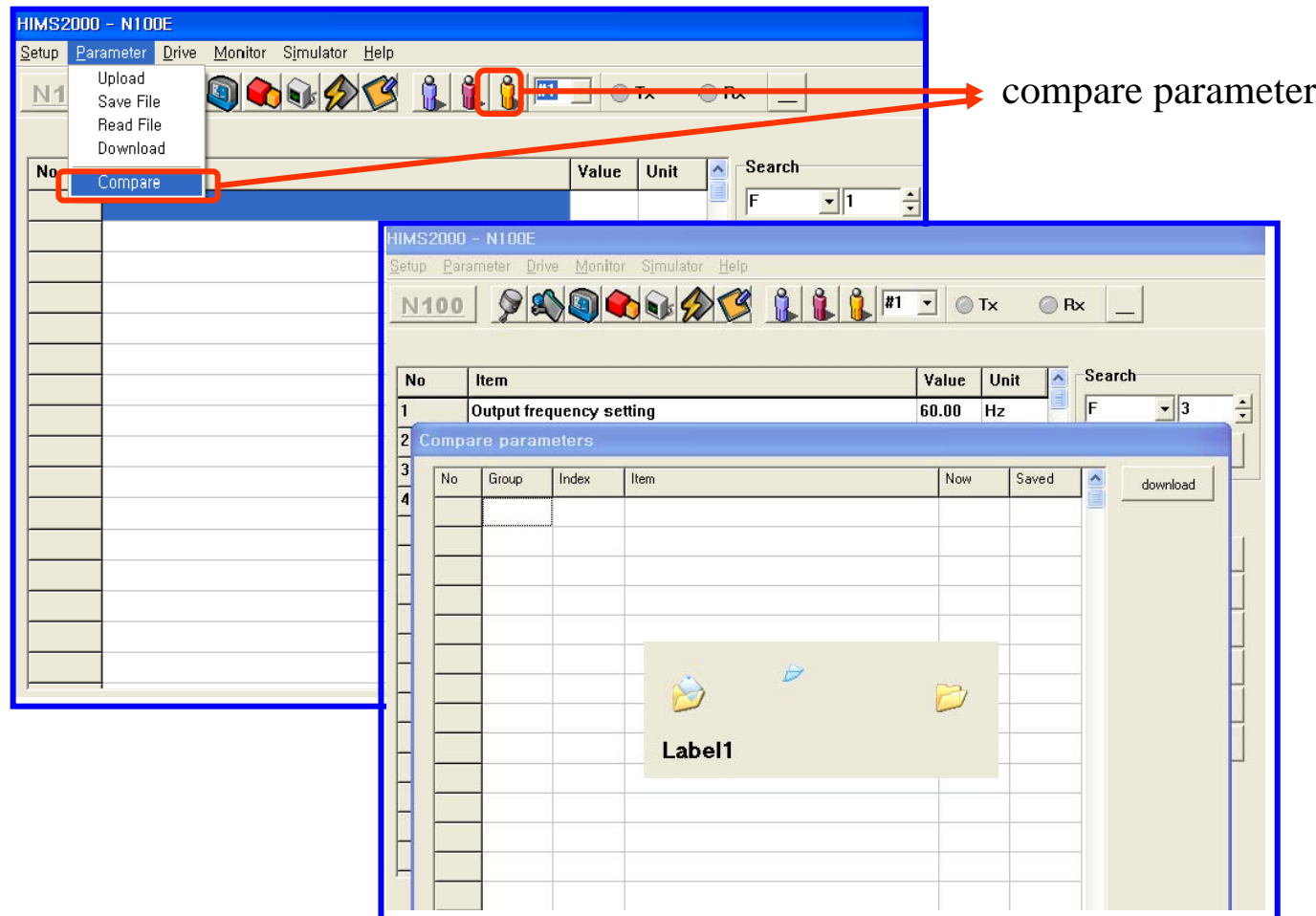
The screenshot shows the HIMS2000 - N100E software interface. The 'Parameter' menu is open, and the 'Download' option is highlighted. A red arrow points from the 'Download' button to the text 'download parameter'. Below this, a second screenshot shows the same software interface with a 'downloading' dialog box open, displaying a folder icon and the text 'Acceleration time 1 setting setting.'.

No	Item	Value	Unit
1	Output frequency setting	60.00	Hz
2	Acceleration time 1 setting	1.0	Sec
3	Deceleration time 1 setting	1.0	Sec
4	Rotation direction setting	0	-



✓ compare parameter

- . compare parameter : compare saving parameter in laptop with current setting value
- . After comparing, display only different parameter between saving and setting parameter
- . In case of malfunction suddenly, you can check parameters at once with this function.



The screenshot shows the HIMS2000 - N100E software interface. The 'Parameter' menu is open, and the 'Compare' option is highlighted. A red arrow points from the 'Compare' option to the 'compare parameter' text. Another red arrow points from the 'Compare' option to the 'compare parameter' text. The main window displays a table with columns 'No', 'Item', 'Value', and 'Unit'. The first row shows 'Output frequency setting' with a value of '60.00' and unit 'Hz'. A 'Compare parameters' dialog box is open, showing a table with columns 'No', 'Group', 'Index', 'Item', 'Now', and 'Saved'. The dialog box also has a 'download' button and a 'Label1' text box.



## 4.5. Graph screen

✓ graph screen of HiMS2000

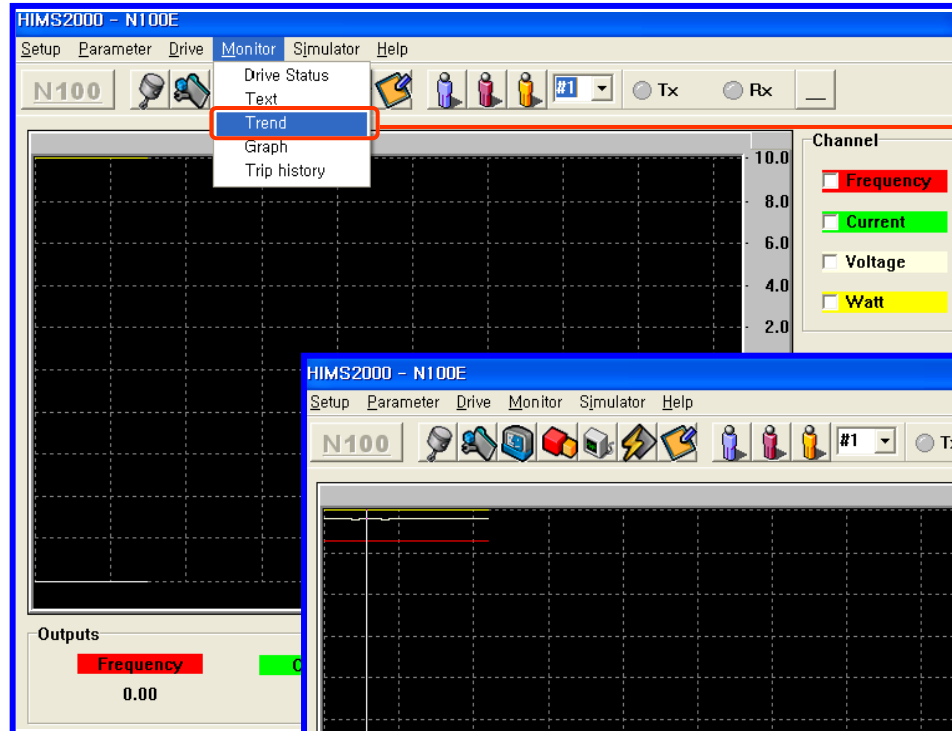
The screenshot displays the HiMS2000 software interface. The main window is titled 'HiMS2000 - N100E'. The menu bar includes 'Setup', 'Parameter', 'Drive', 'Monitor', 'Simulator', and 'Help'. The toolbar contains various icons for navigation and control. The 'Terminal' panel is divided into 'Input' and 'Output' sections. The 'Input' section lists channels CH1 through CH6 with functions like FW and status indicators (red and green dots). The 'Output' section lists channels CH1 through CH3 with functions like RUN and AL and status indicators (green dots). The 'Graph' panel shows two graphs: 'Frequency' (Hz) and 'Current' (A). The 'Current' graph has a '+' button next to it. A 'Set trend ranges' dialog box is open, showing 'Max' set to 100 and 'Min' set to 0. A blue arrow points from the 'Graph' button in the Terminal panel to the main graph area. A red arrow points from the '+' button on the Current graph to the 'Set trend ranges' dialog box.

You can check input / output terminal function and contact status.  
( red : terminal closed  
green : terminal open)

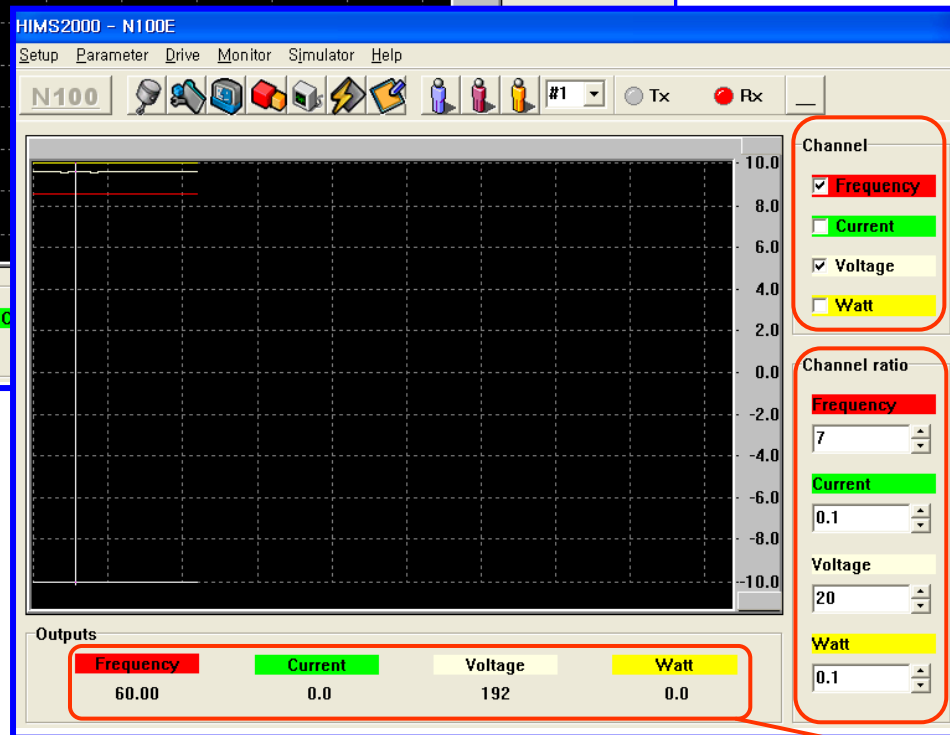
You can change Y-axis range using “+” button

## 4.6. Trend screen

✓ graph screen of HiMS2000



You can check some waveforms only one window for comparing each other.



You can set each channel ratio.  
 for ex.)  
 -. frequency : 10  
 -. channel range : -100 ~ 100

You can see some inverter output data.



## 4.7. Trip screen

✓ inverter trip screen of HiMS2000

HIMS2000 - N100E

Setup Parameter Drive Monitor Simulator Help

N100 #1 Tx Rx

트립정보화면

Trip accumulation count :

Trip history Initialization

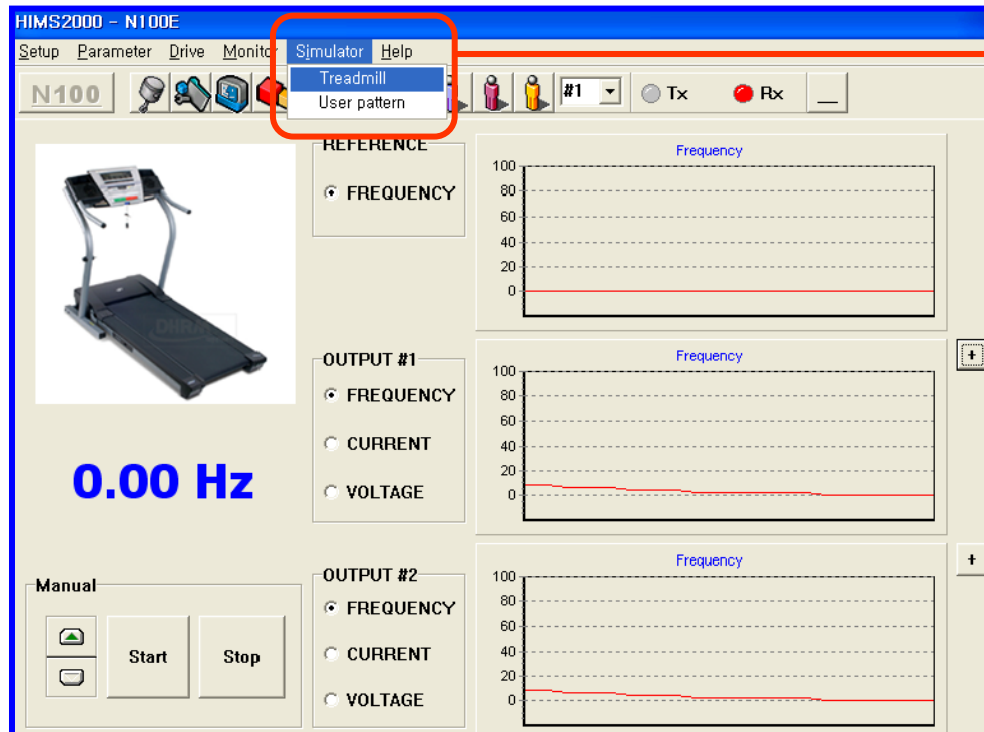
No	Trip Code	Item	Freq	Current	DC Link V
1	-	No Trip	0.00	0.0	0
2	-	No Trip	0.00	0.0	0
3	-	No Trip	0.00	0.0	0
4	-	No Trip	0.00	0.0	0

→ You can check previous 3-times inverter trip information.



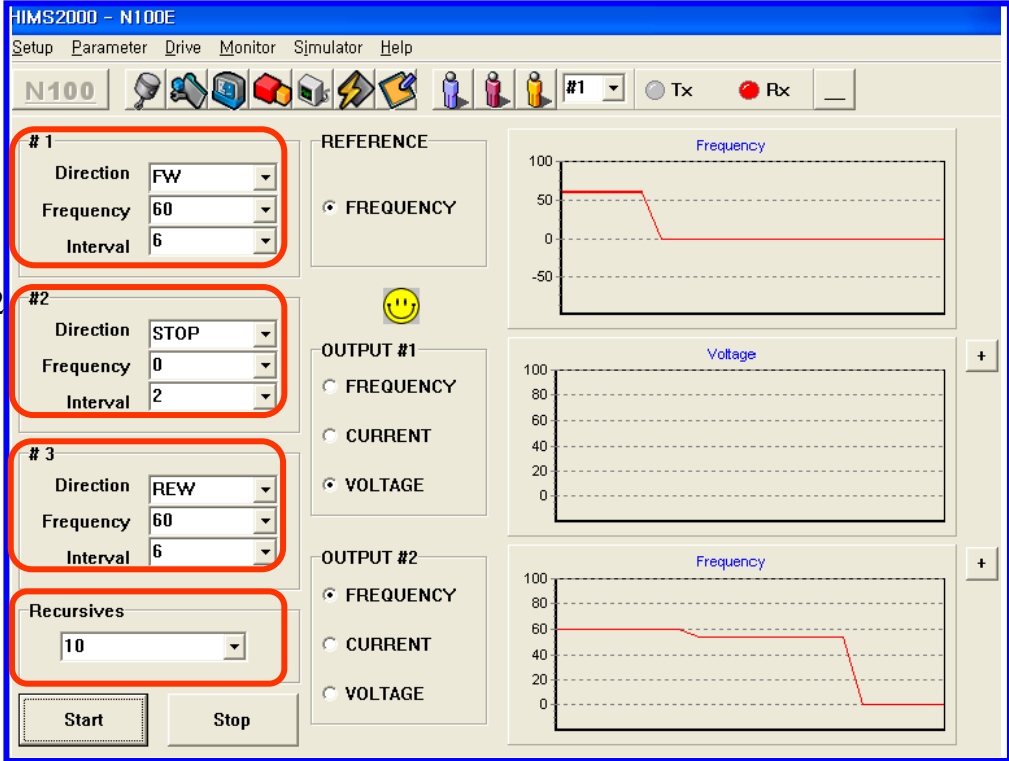
## 4.8. Simulation screen

- ✓ driving simulation function (1) - treadmill



→ You can select treadmill or user pattern.

✓ driving simulation function (2) – user pattern driving



The screenshot shows the HIM2000 - N100E software interface with the following configuration and data:

- user pattern 1:** #1, Direction: FW, Frequency: 60, Interval: 6. The REFERENCE section is set to FREQUENCY.
- user pattern 2:** #2, Direction: STOP, Frequency: 0, Interval: 2. The OUTPUT #1 section is set to VOLTAGE.
- user pattern 3:** #3, Direction: REW, Frequency: 60, Interval: 6. The OUTPUT #2 section is set to FREQUENCY.
- pattern recursive time:** Recursives: 10.

The simulation graphs show:

- Frequency (top):** A step function starting at 60, dropping to 0 at the interval.
- Voltage (middle):** A flat line at 0.
- Frequency (bottom):** A step function starting at 60, dropping to 0 at the interval.

