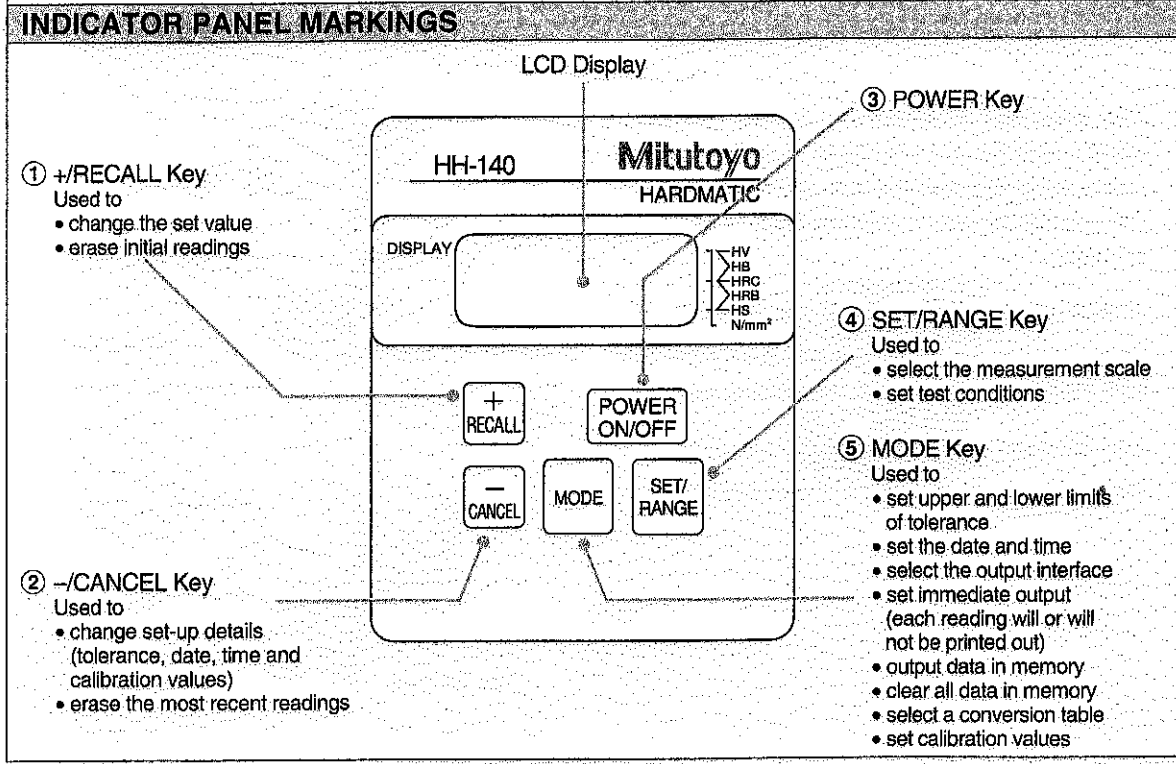
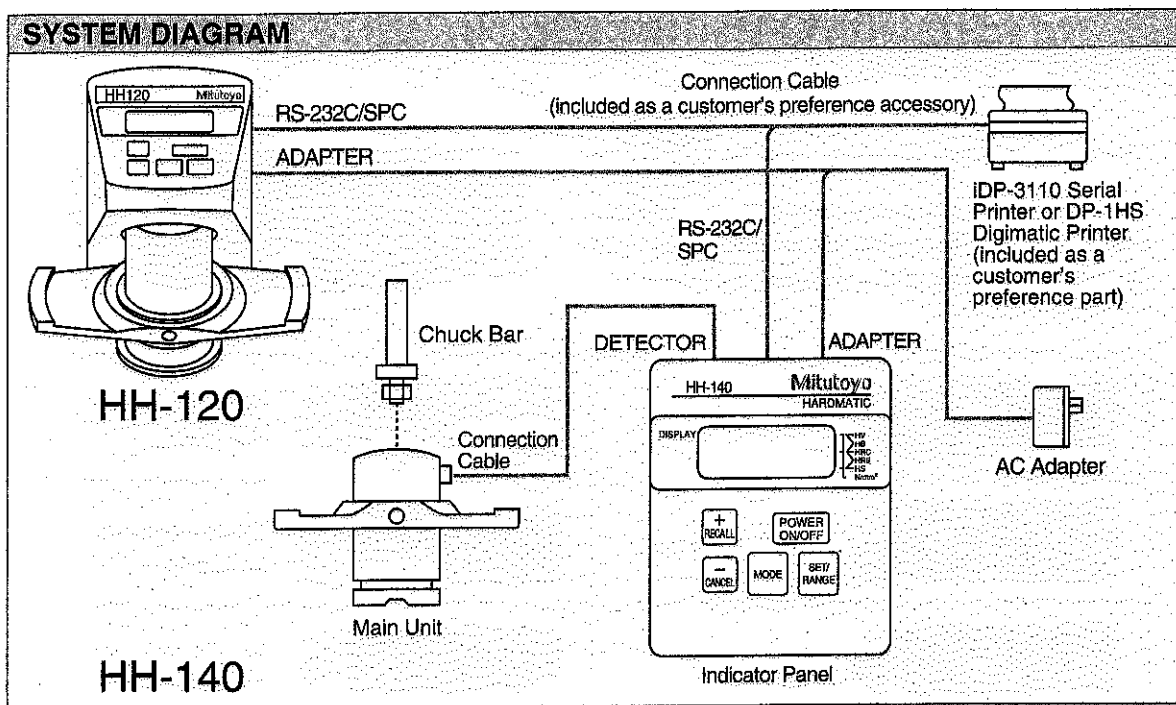


# HARDMATIC HH-120/140 QUICK REFERENCE SHEET



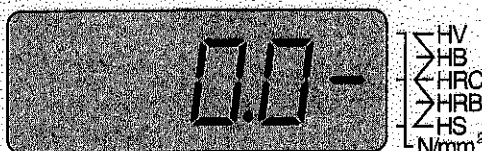
## BASIC OPERATIONS

After you have completed all necessary preparations for the use of this unit, press the **POWER ON/OFF** Key for about 1 second. **+188888** will first appear on the LCD display. As you release your finger from the key, **busy**, then **00-** will be displayed in succession. (Note: The last display at the previous time of use is preserved and will appear on the LCD instead of this.) From this state you can perform measurements using the Test Function.

## SETTING THE HARDNESS SCALE

After performing basic operations, press the **SET/RANGE** Key.

The unit allows you to choose one of these hardness scales: HV, HB, HRC, HRB, HS as well as test tensile strength N/mm<sup>2</sup>. The LCD will display the following:



	Vickers Hardness		Rockwell "B" Hardness
	Brinell Hardness		Shore Hardness for Metals
	Rockwell "C" Hardness		Tensile Strength (N/mm <sup>2</sup> )

After selecting the hardness scale from the LCD display, hold the unit's handgrip. Push the handgrip downward gently onto the test specimen until the unit reaches its natural stopping point (about 2-3 seconds).

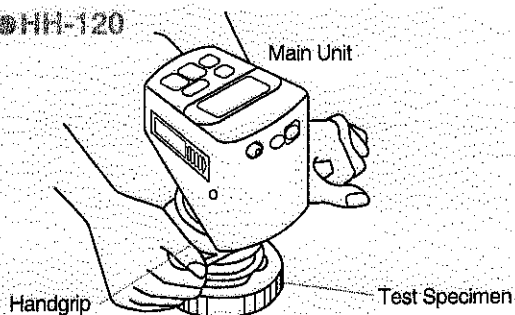
While pushing, **---** appears on the LCD.

Upon reaching the stopping point, release the unit from the test specimen, and the reading appears on

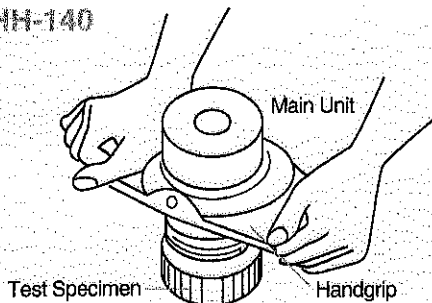
the LCD display **631-** (example).

This is the hardness value for the test specimen.

### ●HH-120

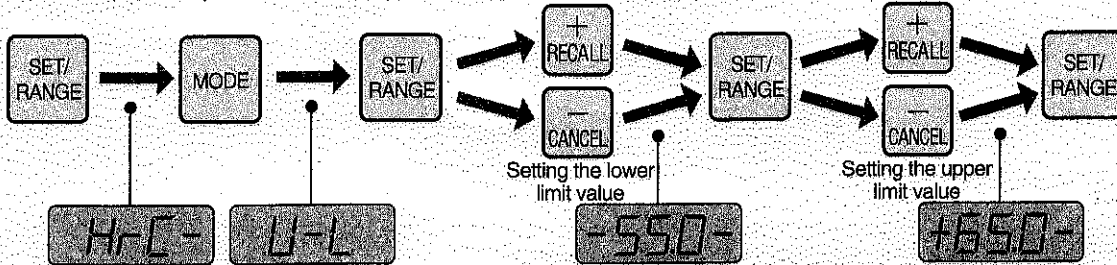


### ●HH-140



### FLOW CHART FOR TOLERANCE SETTINGS

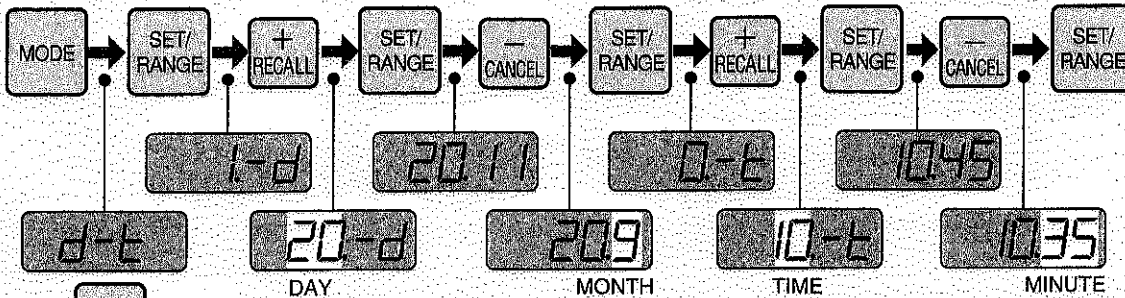
This is an example for setting the lower (55) and upper (65) limits of tolerance for the hardness scale HRC. This can be performed after the completion of all basic operations.



Note: Tolerance values can only be applied to the hardness scale which you have chosen. If you will change the scale, you must also reset the values.

### SETTING THE DATE AND TIME

The unit's clock will continue to operate unless the batteries are removed from the unit. After performing basic operations, you can set the date and time by following the example: (September 20/10:35 a.m.)

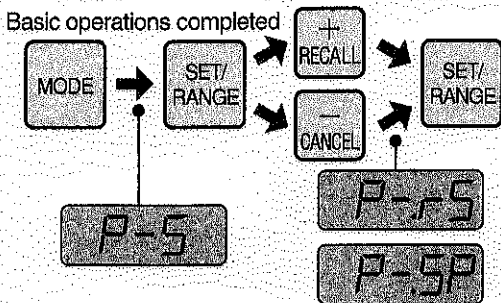


Press **CANCEL** to decrease the number shown on the LCD.

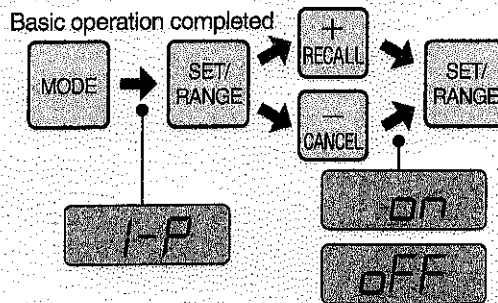
Press **RECALL** to increase the number shown on the LCD.

### SELECTING THE OUTPUT INTERFACE

(SPC OUTPUT or RS-232C OUTPUT)

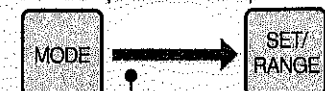


### SETTING IMMEDIATE PRINTOUT



### SETTING OUTPUT OF DATA IN MEMORY

All basic operations completed



LCD display indication

P-L

POUt

Display of text currently being printed

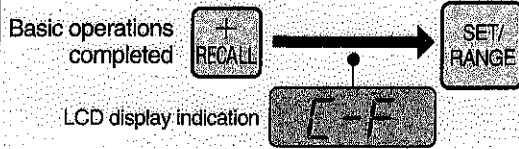
E-L

Display after the print job has been completed

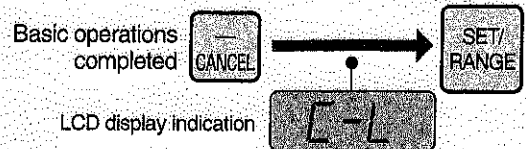
To cancel while in the middle of printing, press the **CANCEL** key.

### ERASING DATA

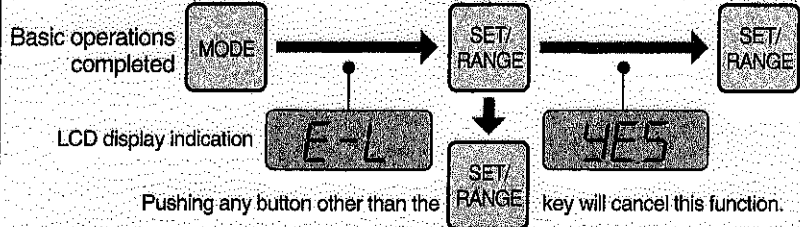
#### ① Erasing initial readings from memory



#### ② Erasing the most recent readings from memory

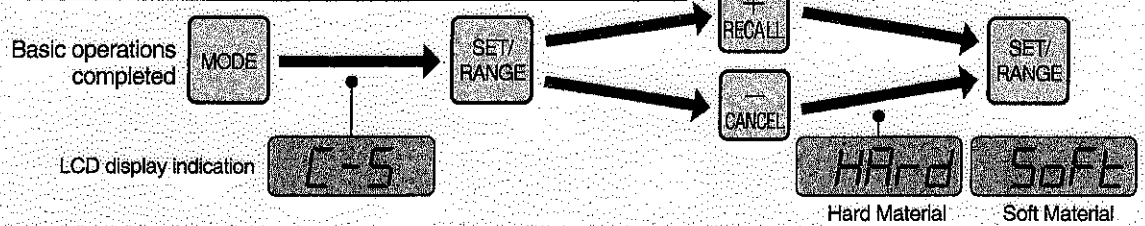


#### ③ Erasing all memory



④ If "FULL" appears on the display, re-perform one of the 3 operations listed above.

### SELECTING HARDNESS CONVERSION TABLES



### CALIBRATION

Enter the calibration value • Be aware that there are two test blocks.  
(The numerals of LCD display indicate examples of 60.3HRC and 30.0HRC.)

