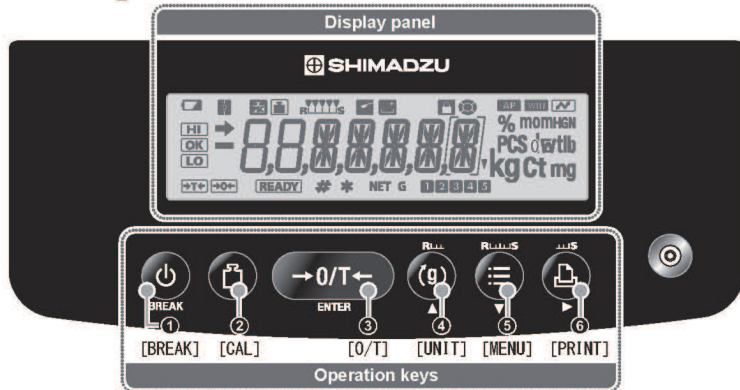


Quick Operation Guide



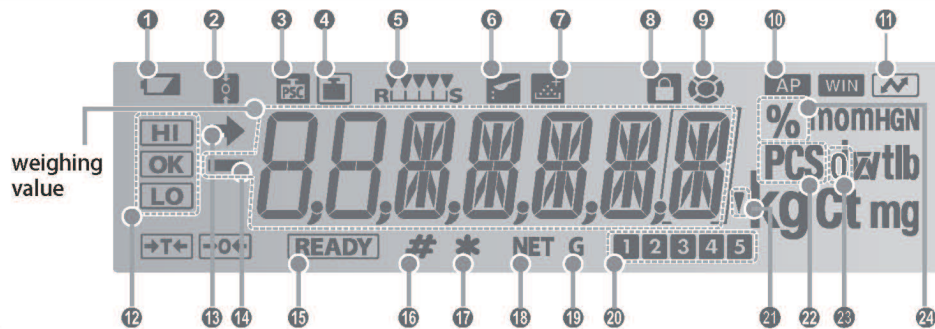
※ is a reference page for the instruction manual <full version> (PDF file) listed on Shimadzu Corporation website. Download it using the below URL or the 2D code.
<https://www.shimadzu.com/an/products/balances/analytical-balances/at-r-series/>



Operation keys

No.	Key	Press Once and Release	Press and Hold for About 3 Seconds
1	[BREAK]	Switches between the operation and standby modes	—
2	[CAL]	Performs calibration	Enters the calibration menu
3	[O/T]	Tares the balance (setting it to zero)	Opens the zero / tare menu
4	[UNIT]	<ul style="list-style-type: none"> In the weighing mode: Used to select the unit When piece counting: Displays the unit weight When performing percentage weighing: Displays the reference weight 	<ul style="list-style-type: none"> In the weighing mode: Opens the unit setting menu When piece counting: Used to select the item number When performing percentage weighing: Used to select the percentage reference
5	[MENU]	Turns the smart setting mode on.	Switches between the weighing mode and the application function mode
6	[PRINT]	Outputs the weight reading to a peripheral device (printer or PC)	Opens the data output menu

Display panel



No.	Display	Name	Description	Reference*
1		Battery symbol	Lights up when the battery voltage is low.	—
2		Zero tracking symbol	Lit when the zero tracking function is set ON.	P.65
3		Perfect Self Calibration symbol	Blinks before Perfect Self Calibration starts.	P.56
4		Weight symbol	This symbol is lit during calibration. Blinks when calibration is necessary for a verified balance as a legal measuring instrument.	P.50
5		Easy setting indicator	Indicates what level the response and stability are currently set to.	P.72
6		Pouring symbol	Lit when the pouring mode is set.	P.71
7		Formulation symbol	Lit during mixing measurement (formulation) operations.	P.102
8		Menu lock symbol	Lit while the menu is locked.	P.48
9		Menu operation key symbol	Indicates that the menu option currently displayed requires confirm and set operations when is displayed in the middle. Indicates that a higher or lower level exists in the menu hierarchy when arcs are displayed on the right and left side. Indicates that other menu options can be selected when arcs on the upper and lower side is displayed.	P.43

No.	Display	Name	Description	Reference*
10		Auto print symbol	Lit when the Auto Print function is set.	P.111
11		Communication symbol	Indicates that data is being exchanged with an external device.	—
12		Comparator symbol	When the comparator function (Checkweighing) has been set, indicates the comparison judgment.	P.107
13		Stability mark	Lit when the weight reading is stable. Lit when the option currently set in menu setting is displayed.	P.44 P.70
14		Minus symbol	Lit when the weight reading is negative.	—
15		Ready symbol	Lit during the standby mode. During weighing, lit to indicate the ready to weigh status, for example when using the mixing measurement.	P.41 P.102
16		Number symbol	Lit when it is possible to enter numerical values.	P.45
17		Hold symbol	Lit when a value that is not the real-time weight reading (for example the indication of the unit weight in piece counting) is displayed.	P.85 P.90
18		Net weight symbol	Indicates that the weight reading displayed in mixing measurement (formulation) is the net weight of the current component with the weight of the container and prior components. Also indicates that a measuring operation is in progress.	P.103
19		Gross weight symbol	Indicates that the weight reading displayed in mixing measurement (formulation) is the total weight of all of the components of the mixture with the weight of the container subtracted.	P.103
20		Item number indication	Shows the item number in the piece counting mode.	P.83
21		Inverse triangle symbol	Will be displayed during specific gravity measurement. Or if displayed when the decimal place of the conversion coefficient is changed to an arbitrary setting for each user, a value with no decimal point can be input.	P.46
22		Piece counting symbol	Lit while the piece counting mode is in effect.	P.82
23		Specific percentage weighing symbol	Lit when the specific percentage reference has been set for percentage weighing.	P.89
24		Percentage weighing symbol	Lit during percentage weighing.	P.90

Menu Map Sheet

Refer to the instruction manual <full version> ("Menu Settings" P.42) for details on how to interpret the menu map and the menu settings structure.

* is a reference page for the instruction manual <full version> (PDF file) listed on our company website. Download it using the below URL or the 2D code.

https://www.shimadzu.com/an/products/balances/analytical-balances/at-r-series/



Press (g) or (=) to search for the menu option.	Press (←) to return to the previous menu option.
Press (→) to proceed to the next menu option.	Refer to the instruction manual <full version>.
Press (→/T←) to confirm.	* The default settings (settings when the menu is reset)

Main Menu

weight display **(=)** Press [MENU] twice in the weighing mode.

- *STAND** General weighing mode **☞** P.71
- POURING** Pouring mode **☞** P.71
- *PSC** Automatic calibration (ATX-R series only) **☞** P.56
- *ZTAP** Zero tracking function **☞** P.65

Application function mode

- APLFUNC** Application function mode **☞** P.82
- PCS** Piece counting **☞** P.82
- SAMPLE** Item number **1 ~ 9** **☞** P.82
- PERCENT** Percentage weighing **☞** P.87
- SAMPLE** 100% reference **☞** P.87
- OPTION** Specific percentage reference **☞** P.87
- SG** Specific gravity measurement **☞** P.91
- SSG** Solid Specific Gravity Measurement **☞** P.91
- LSG** Liquid Specific Gravity Measurement **☞** P.91
- SGHOLD** Data Hold **☞** P.91
- RTPCOP** Calculation Formula Selection **☞** P.91
- FORMULA** Formulation **☞** P.102

Other functions

- TOOLS** Other functions **☞** P.107
- TARGET** Target mode **☞** P.107
- TGVAL** Target value **☞** P.107
- LMVAL** Permissible range **☞** P.107
- CHECKW** Checkweighing mode **☞** P.109
- UPRANG** Checkweighing range upper limit **☞** P.109
- HLLIM** Pass range upper limit **☞** P.109
- LDLIM** Pass range lower limit **☞** P.109
- UNDRNG** Checkweighing range lower limit **☞** P.109
- PARAMW** Weighing parameters **☞** P.75
- STBMK** Stability mark **☞** P.75
- FAST** Fast **☞** P.75
- BRND** Stability detection range **☞** P.74
- 050** **☞** P.74
- 10** **☞** P.74
- 100** **☞** P.74
- 1000** **☞** P.74
- 10000** **☞** P.74
- CHGMIN** 1d/10d Display **☞** P.38
- 10** **☞** P.38
- 100** **☞** P.38
- SYSTEM** System **☞** P.40
- POINT** Decimal point indication **☞** P.40
- PERIOD** Period **☞** P.40
- COMMA** Comma **☞** P.40
- *AUTOOFF** Auto power-off **☞** P.140
- START** Start display **☞** P.141
- AUTO** Weighing mode **☞** P.141
- *SEMAUTO** OFF display **☞** P.141
- MANU** All segments lit **☞** P.141
- BALID** Balance ID **☞** P.63
- PPSWARD** Password **☞** P.142
- CONDOUT** Menu settings output **☞** P.49
- RESET** Menu reset **☞** P.47

Data Output Menu

weight display **(P)** Press [PRINT] for about 3 seconds in the weighing mode.

- APLPRN** Application output **☞** P.113
- AUTOPRN** Auto print function **☞** P.113
- L1D** On Ld **☞** P.113
- L1DL** On -Ld **☞** P.113
- L2D** On OLd **☞** P.113
- L2DL** On -OLd **☞** P.113
- L3D** On OK **☞** P.113
- ZRET** Zero return judgment **☞** P.111
- PE.T.0** Zero or negative value **☞** P.111
- PE.T.50** 50% function **☞** P.111
- SEOPRN** Continuous output function **☞** P.113
- MANU** Key operation **☞** P.113
- NOFIL** No filter **☞** P.113
- PRINTF** Output timing change function **☞** P.131
- *SOON** **☞** P.131

Communication settings

- COMSET** Communication settings **☞** P.127
- MODE1** Standard settings (MODE1 ~ MODE5) **☞** P.127
- MODE2** **☞** P.127
- MODE3** **☞** P.127
- MODE4** **☞** P.127
- MODE5** **☞** P.127
- MODEU** User-specified settings **☞** P.129
- BPS** Baud rate **☞** P.129
- 300** [300] **☞** P.129
- 600** [600] **☞** P.129
- *1200** [1200] **☞** P.129
- 2400** [2400] **☞** P.129
- 4800** [4800] **☞** P.129
- 9600** [9600] **☞** P.129
- 192K** [19.2 K] **☞** P.129
- 384K** [38.4 K] **☞** P.129
- PARITY** Parity **☞** P.129
- PNONE** None **☞** P.129
- PODD** Odd **☞** P.129
- PEVEN** Even **☞** P.129
- STOP** Stop bit **☞** P.129
- 5.1** 1 bit **☞** P.129
- 5.2** 2 bits **☞** P.129
- HANDSHK** Handshake **☞** P.129
- HSOFF** None **☞** P.129
- HSHW** Software **☞** P.129
- HSHW** Hardware **☞** P.129
- HS.TIM** Timer **☞** P.129
- BFORM** Data format **☞** P.130
- FORM 1** Data format 1 **☞** P.130
- FORM 2** Data format 2 **☞** P.130
- FORM 3** Data format 3 **☞** P.130
- FORM 4** Data format 4 **☞** P.130
- FREE** Free format **☞** P.130
- DELIM** Delimiter **☞** P.130
- CR** CR **☞** P.130
- LF** LF **☞** P.130
- CR+LF** CR+LF **☞** P.130
- COMMA** Comma **☞** P.130

Unit setting menu

weight display **(g)** Press [UNIT] for about 3 seconds in the weighing mode.

- *UNIT-g** Other units cannot be selected in some countries due to legal restrictions. **☞** P.78
- UNIT-mg** **☞** P.78
- UNIT-ct** **☞** P.78
- UNIT-mom** **☞** P.78
- UNIT-U** Conversion factors **☞** P.79
- CONWK** User-specified units **☞** P.79
- MINID** Minimum indication **☞** P.80

Calibration menu

weight display **(CAL)** Press [CAL] for about 3 seconds in the weighing mode.

- PSC** Automatic calibration (ATX-R series only) **☞** P.56
- CAL:EE** Span calibration using an external weight **☞** P.54
- E:CAL** **☞** P.54
- I:CAL** Span calibration using the internal weight **☞** P.52
- GLPOUT** GLP output function **☞** P.143
- *1:PCAL** Calibration of the internal weight (ATX-R series only) **☞** P.58

Zero / tare menu

weight display **(→/T←)** Press [0/T] for about 3 seconds in the weighing mode.

- *ZTAP** Zero tracking function **☞** P.65
- ATAPE** Auto tare function **☞** P.68
- *AZERO** Auto zero function **☞** P.66
- *1:TAREF** Zero / tare timing change function **☞** P.69
- *SOON** **☞** P.69

*1 Not applicable to a verified balance as a legal measuring instrument.