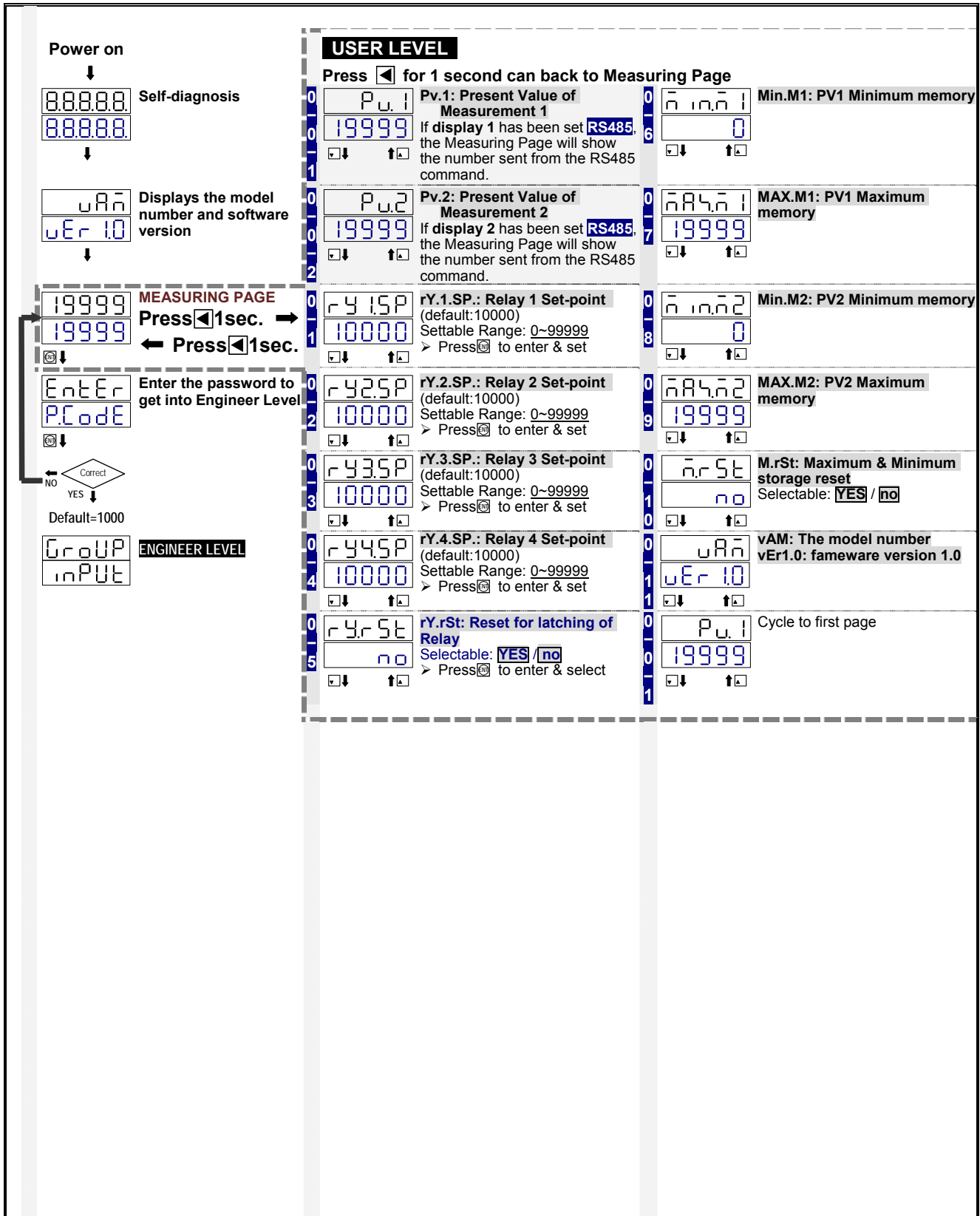


OPERATION MANUAL:

USER LEVEL



ENGINEER LEVEL – INPUT 1 GROUP

ENGINEER LEVEL

Press **ENTER** to enter Function Set Page;

Press **ENTR** for 1+ second to return Function Group Page.

Measuring Page
 19999
 19999
 [ENTR]

Pass code enter
 EntEr
 P.CodE
 [ENTR]

Correct
 YES ↓
 NO
 Default=1000

GROUP INPUT 1 GROUP
 InPt.1
 [ENTR]

Press **ENTR** →
 ← Press **ENTR** 1sec.

A1-1 **Ai1.Lo: Analogue input 1 low**
 (Default: 0.00%);
 Range: 0.00%~100.00%
 > Press **ENTER** to enter & set

A1-2 **Ai1.Hi: Analogue input 1 high**
 (Default: 100.00%);
 Range: 0.00%~100.00%
 > Press **ENTER** to enter & set

A1-3 **Pv1.dP: Decimal Point of PV1**
 (Default: 0);
 Range: 0 / 0.0 / 0.00 / 0.000 / 0.0000
 > Press **ENTER** to enter & set

A1-4 **Lo.SC.1: Low scale to relative input 1 low**
 (Default: 0);
 Range: -19999~+29999
 > Press **ENTER** to enter & set

A1-5 **Hi.SC.1: High scale to relative input 1 high**
 (Default: 199.99);
 Range: -19999~+29999
 > Press **ENTER** to enter & set

A1-6 **Pv1.Zo: Fine Zero Adjustment for PV display 1**
 (Default: 0);
 Range: -19999~29999
 > Press **ENTER** to enter & set

A1-7 **Pv1.SPn: Fine Span Adjustment for PV display 1**
 (Default: 0);
 Range: -19999~29999
 > Press **ENTER** to enter & set

A1-8 **Z.S.CL1: Clear Fine Zero & Span Adjustment for PV display 1**
 (Default: nonE);
 Range: nonE / Pv.Zro / Pv.SPn / both
 > Press **ENTER** to enter & set

A1-9 **Pv.M1=: Mathematic function for PV display 1 [DS1]**
 (default: Pv.1);
 Selectable:
 Pv.1/[1.Add.2]/[1.Sub.2] / [2.Sub.1] / [1.MUL.2] / [1.div.2] / [2.div.1]
 Pv.1: [DS1] relative input 1
 1.Add.2: [DS1] shows PV1+ PV 2
 1.Sub.2: [DS1] shows PV1 - PV 2
 2.Sub.1: [DS1] shows PV2 - PV 1
 1.MUL.2: [DS1] shows PV1xPV 2
 1.div.2: [DS1] shows PV1÷ PV2
 2.div.1: [DS1] shows PV2÷ PV1
 > Press **ENTER** to enter & select

A1-10 **dPLY1: Display 1 [DS1] Function**
 (default: Pv.M1);
 Selectable:
 Pv.M1 / Min.M1 / MAX.M1 / RS485
 Pv.M1: Present Value of Pv.M1
 Min.M1: Minimum Hold of Pv.M1
 MAX.M1: Maximum Hold of Pv.M1
 RS485: Writing to display from RS485 command
 > Press **ENTER** to enter & set

A1-11 **Lo.Ct.1: Low Cut level to show "0" for display 1 [DS1]**
 (default: 0);
 Settable: ±19999 counts
 > Press **ENTER** to enter & set

A1-12 **AvG: Average for display 1 [DS1] and display 2 [DS2] smooth**
 (default: 1time);
 Settable:
 1(no function)~99times
 > Press **ENTER** to enter & set

A1-13 **d.FiLT: Digital filter for display 1 [DS1] and display 2 [DS2]**
 (default: 0);
 Selectable:
 0(no function)/1~99times
 > Press **ENTER** to enter & set

A1-14 **dn.KEY: Down key function**
 (default: nonF);
 選擇範圍: none / rEL.Pv / Pv.HLd / M.rSt / rY.rSt
 none(None): no function
 rEL.Pv: Relative PV(ΔPV)
 Pv.HLd: PV hold memorize
 M.rSt: Reset for max./mini.
 rY.rSt: Reset for Relay Lo/Hi energized hold.
 > Press **ENTER** to enter & set

A1-15 **P.CodE: Pass Code for enter Engineer Level**
 (default: 1000);
 Selectable: 0000~9999
 > Press **ENTER** to enter & set

A1-16 **F.LoCk: Function Level Lock**
 (default: nonE);
 Selectable: nonE / USEr / EnG / ALL
 nonE: No lock
 USEr: User Level lock
 EnG: Engineer Level lock
 ALL: All Level lock
 > Press **ENTER** to enter & set

A1-1 **R.i.Lo**
 Cycle to first page

➤ **ENGINEER LEVEL – INPUT 2 GROUP**

ENGINEER LEVEL

Press **Enter** to enter **Function Set Page**;

Press **1+** second to return **Function Group Page**.

GROUP INPUT 2 GROUP
 InPt2 Press **Enter** →
 ← Press **1** 1sec.

A2	Ai2.Lo	Ai2.Lo: Analogue input 2 low (Default: 0.00%); Range: 0.00%~100.00% > Press Enter to enter & set
A2	Ai2.Hi	Ai2.Hi: Analogue input 2 high (Default: 100.00%); Range: 0.00%~100.00% > Press Enter to enter & set
A2	Pv2.dP	Pv2.dP: Decimal Point of PV2 (Default: 0); Range: 0 / 0.0 / 0.00 / 0.000 / 0.0000 > Press Enter to enter & set
A2	Lo.SC.2	Lo.SC.2: Low scale to relative input 2 low (Default: 0); Range: -19999~+29999 > Press Enter to enter & set
A2	Hi.SC.2	Hi.SC.2: High scale to relative input 2 high (Default: 199.99); Range: -19999~+29999 > Press Enter to enter & set
A2	Pv2.Zo	Pv2.Zo: Fine Zero Adjustment for PV display 2 (Default: 0); Range: -19999~29999 > Press Enter to enter & set
A2	Pv2.Sn	Pv2.Sn: Fine Span Adjustment for PV display 2 (Default: 0); Range: -19999~29999 > Press Enter to enter & set
A2	Z.S.CL2	Z.S.CL2: Clear Fine Zero & Span Adjustment for PV display 2 (Default: nonE); Range: nonE / Pv.Zro / Pv.SPn / both > Press Enter to enter & set
A2	Pv.M2	Pv.M2=: Mathematic function for PV display 2 [DS2] (default: Pv.2); Selectable: Pv.2 / 1.Add.2 / 1.Sub.2 / 2.Sub.1 / 1.MUL.2 / 1.div.2 / 2.div.1 Pv.2: [DS2] relative input 2 1.Add.2: [DS1] shows PV1+ PV 2 1.Sub.2: [DS1] shows PV1 - PV 2 2.Sub.1: [DS1] shows PV2 - PV 1 1.MUL.2: [DS1] shows PV1xPV 2 1.div.2: [DS1] shows PV1÷ PV2 2.div.1: [DS1] shows PV2÷ PV1 > Press Enter to enter & select

A2	dPLY2	dPLY2: Display 2 [DS2] Function (default: Pv.M2); Selectable: Pv.M2 / Min.M2 / MAx.M2 / RS485 Pv.M2: Present Value of Pv.M2 Min.M2: Minimum Hold of Pv.M2 MAx.M2: Maximum Hold of Pv.M2 RS485: Writing value to display from RS485 command > Press Enter to enter & set
A2	Lo.Ct.2	Lo.Ct.2: Low Cut level to show "0" for display 2 [DS2] (default: 0); Settable: ±19999 counts > Press Enter to enter & set
A2	AVG	AVG: Average for display 1 [DS1] and display 2 [DS2] smooth (default: 1 time); Range: 1(no function)~99times > Press Enter to enter & set
A2	d.FILT	d.FILT: Digital filter for display 1 [DS1] and display 2 [DS2] to reduce noise influence (default: 0); Selectable: 0(no function)/1~99times > Press Enter to enter & set
A2	dn.KEY	dn.KEY: Down key function (default: nonE); 選擇範圍: nonE / rEL.Pv / Pv.HLd / M.rSt / rY.rSt nonE(None): no function rEL.Pv: Relative PV(ΔPV) Pv.HLd: PV hold M.rSt: Reset for max./mini. memorize rY.rSt: Reset for Relay Lo/Hi energized hold. > Press Enter to enter & set
A2	P.CoDE	P.CoDE: Pass Code Set for enter Engineer Level (default: 1000); Selectable: 0000~9999 > Press Enter to enter & set
A2	F.LoCk	F.LoCk: Function Level Lock (default: nonE); Selectable: nonE / USEr / EnG / ALL nonE: No lock USEr: User Level lock EnG: Engineer Level lock ALL: All Level lock > Press Enter to enter & set
A2	Ai2.Lo	Cycle to first page

➤ **ENGINEER LEVEL --- RELAY GROUP** (The group will be hidden, if the meter is without relays)

ENGINEER LEVEL

Press **ENT** to enter **Function Set Page**;

Press **◀** 1+ second to return **Function Group Page**.

GROUP

RELAY GROUP

Press **ENT** →

← Press **◀** 1sec.

↓ ↑

B	Display	Description	Display	B
1	rY.Sb.1 0	rY.Sb.1: Start band of Relay energized for display 1 [DS1] (default: 0); Range: 0~9999 counts > Press ENT to enter & set	rY1.Fd: Relay 1 de-energized delay time (default: 0:00.0); Settable: 0:00.0~9(m):59.9(s) > Press ENT to enter & set	9
2	rY.Sd.1 00.00	rY.Sd.1: Start delay time of Relay energized for display 1 [DS1] (default: 0:00.0); Range: 0:00.0~9(m):59.9(s) > Press ENT to enter & set	r2.SEL: Multi-Cross Selection (PV1 or PV2) for Relay 2 Output (default: Pv.M1); Selectable: Pv.M1 / Pv.M2 Pv.M1 : Present Value 1 [DS1] Pv.M2 : Present Value 2 [DS2] > Press ENT to enter & select	10
3	rY.Sb.2 0	rY.Sb.2: Start band of Relay energized for display 2 [DS2] (default: 0); Settable: 0~9999 counts > Press ENT to enter & set	rY.2.Md: Relay 2 energized mode (default: Hi); Selectable: oFF / Lo / Hi / Lo.HLd / Hi.HLd / dosame as rY1.Md..... > Press ENT to enter & select	11
4	rY.Sd.2 00.00	rY.Sd.2: Start delay time of Relay energized for display 2 [DS2] (default: 0:00.0); Settable: 0:00.0~9(m):59.9(s) > Press ENT to enter & set	rY.2.HY: Relay 2 Hysteresis (default: 0); Settable: 0~5000 counts > Press ENT to enter & set	12
5	r1.SEL Pv.M1	r1.SEL: Multi-Cross Selection (PV1 or PV2) for Relay 1 Output (default: Pv.M1); Selectable: Pv.M1 / Pv.M2 Pv.M1 : Present Value 1 [DS1] Pv.M2 : Present Value 2 [DS2] > Press ENT to enter & select	rY.2.HY: Relay 2 Hysteresis (default: 0); Settable: 0~5000 counts > Press ENT to enter & set	13
6	rY1.Md Hi	rY1.Md: Relay 1 energized mode (default: Hi); Selectable: oFF / Lo / Hi / Lo.HLd / Hi.HLd / do oFF : Turn off the Relay Lo : Low Level Energized; The relay energized when PV < Setpoint. Hi : High Level Energized; The relay energized when PV > Setpoint. Lo.HLd : Low Level energized latch; When the PV lower than set-point, the relay will be energized and latch until manual reset by from key in User Level or E.C.I . Hi.HLd : High Level energized latch; When the PV higher than set-point, the relay will be energized and latch until manual reset by from key in User Level or E.C.I . do (Digital Output) : Relay energized by RS485 command > Press ENT to enter & select	rY2.rd: Relay 2 energized delay time (default: 0:00.0); Settable: 0:00.0~9(m):59.9(s) > Press ENT to enter & set	14
7	rY1.HY 0	rY1.HY.: Relay 1 Hysteresis (default: 0); Settable: 0~5000 counts > Press ENT to enter & set	r3.SEL: Multi-Cross Selection (PV1 or PV2) for Relay 3 Output (default: Pv.M2); Selectable: Pv.M1 / Pv.M2 Pv.M1 : Present Value 1 [DS1] Pv.M2 : Present Value 2 [DS2] > Press ENT to enter & select	15
			rY3.Md: Relay 3 energized mode (default: Lo); Selectable: oFF / Lo / Hi / Lo.HLd / Hi.HLd / dosame as rY1.Md..... > Press ENT to enter & set	16
			rY3.HY: Relay 3 Hysteresis (default: 0); Settable: 0~5000 counts > Press ENT to enter & set	17
			rY3.rd: Relay 3 energized delay time (default: 0:00.0); Settable: 0:00.0~9(m):59.9(s) > Press ENT to enter & set	18
			rY3.Fd: Relay 3 de-energized delay time (default: 0:00.0); Settable: 0:00.0~9(m):59.9(s) > Press ENT to enter & set	19

B 8	rY1.rd 0000	rY1.rd: Relay 1 energized delay time (default: 0:00.0); Settable: 0:00.0~9(m):59.9(s) > Press ENT to enter & set	B 2 0	r4.SEL P.v.M2	r4.SEL: Multi-Cross Selection (PV1 or PV2) for Relay 4 Output (default: P.v.M2); Selectable: P.v.M1 / P.v.M2 P.v.M1 : Present Value 1 [DS1] P.v.M2 : Present Value 2 [DS2] > Press ENT to enter & select
Pre. Page					
B 2 1	rY4.Md H	rY4.Md: Relay 4 energized mode (default: Lo); Settable: oFF/Lo/Hi/Lo.HLd/Hi.HLd /do/Go.12/Go.23 Go-1.2 : Go compare with SP1 & SP2; Go function with Set-Point 1 and Set-point 2. Go relay energized when the condition is set-point 1(Hi) > reading > set-point 2(Lo) Go-2.3 : Go compare with SP2 & SP3; Go function with Set-Point 2 and Set-point 3. Go relay energized when the condition is set-point 2(Hi) > reading > set-point 3(Lo)same as rY1.Md..... > Press ENT to enter & set	B 2 2	rY4.HY 0	rY4.HY: Relay 4 Hysteresis (default: 0); Settable: 0~5000 counts > Press ENT to enter & set
B 2 3	rY4.rd 0000	rY4.rd: Relay 4 energized delay time (default: 0:00.0); Settable: 0:00.0~9(m):59.9(s) > Press ENT to enter & set	B 2 3	rY4.Fd 0000	rY4.Fd: Relay 4 de-energized delay time (default: 0:00.0); Settable: 0:00.0~9(m):59.9(s) > Press ENT to enter & set
B 2 4	rY4.Fd 0000	rY4.Fd: Relay 4 de-energized delay time (default: 0:00.0); Settable: 0:00.0~9(m):59.9(s) > Press ENT to enter & set	B 2 4	rY5.b.1 0	Cycle to first page

ENGINEER LEVEL --- ANALOGUE OUTOUT and RS485 GROUP
(The group will be hidden, if the meter has no analogue output or RS485)

ENGINEER LEVEL							
Press ENT to enter Function Set Page ; Press ENT 1+ second to return Function Group Page .							
GROUP ANALOGUE OUTPUT GROUP Press ENT → ← Press ENT 1sec.		D 1	Ao.SEL P.v.M1	Ao.SEL: Multi-Cross Selection of Analogue Output (default: P.v.M1); Settable: P.v.M1 / P.v.M2 > Press ENT to enter & select	D 6	Ao.SPn 0	Ao.SPn: Fine Span Adjustment for Analog High Output (default: 0); Settable: -19999~29999 > Press ENT to enter & set
		D 2	Ao.TYP A.4-20	Ao.TYP: Analogue Output type selection (default: A.4~20); Settable: v.0-10 (0~10V) / v.0-5 (0~5V) / v.1-5 (1~5V) / A.0-20 (0~20mA) / A.4-20 (4~20mA) / A.0-10 (0-10mA) > Press ENT to enter & set	D 7	Z.S.CLR nonE	Z.S.CLR: Clear for Zero & Span Fine adjustment (default: nonE); Settable: nonE / Ao.Zro / Ao.SPn / both nonE : No clear Ao.Zro : Clear Zero Adjustment Ao.SPn : Clear Span Adjustment both : Clear Zero and Span Adjustment > Press ENT to enter & set
		D 3	Ao.LS 0	Ao.LS: Analogue Output Low to relative Low Scale (default: according to Lo.SC); Settable: -19999~19999 > Press ENT to enter & set	D 8	Ao.LMt 110.00	Ao.LMt: Analog Output High Limit (default: 110.00); Settable: -0.00~110.00% of FS > Press ENT to enter & set
		D 4	Ao.HS 19999	Ao.HS: Analogue Output High relative High Scale (default: according to Hi.SC); Settable: -19999~29999 > Press ENT to enter & set	D 1	Ao.SEL P.v.M1	Cycle to first page
		D 5	Ao.Zro 0	Ao.Zro: Fine Zero Adjustment for Analog Low Output (default: 0); Settable: -19999~29999 > Press ENT to enter & set			
GROUP RS485 GROUP Press ENT → ← Press ENT 1sec.		E 1	AdRES 1	AdRES: Device number of the meter (default: 1); Settable: 1~255 > Press ENT to enter & set	E 3	Prity nonE	Prity: Parity (default: n.Stb.2); Settable: n.Stb.1 / n.Stb.2 / odd / EvEn n.Stb.1 : None, 1 stop bit

The image shows a menu interface with several elements:

- Left Panel:** A vertical double-headed arrow is positioned above a box containing 'GroUP' and 'inPt.1'. Below this box are two arrow icons (down and up).
- Top-Left Panel:** A box labeled '2' contains 'bAUD' and '9600'. Below it are two arrow icons (down and up).
- Top-Middle Panel:** Text reads 'baud: Baud rate (default: 9600); Settable: 1200 / 2400 / 4800 / 9600 / 19200 / 38400'. Below this is the instruction '> Press [Enter] to enter & set'.
- Top-Right Panel:** Text reads 'n.Stb.2: None, 2 stop bits', 'odd: odd', 'EvEn: Even', and '> Press [Enter] to enter & set'. Below this is a box labeled '1' containing 'AdrES' and a vertical bar '|'. Below the box are two arrow icons (down and up).
- Bottom-Right Panel:** Text reads 'Cycle to first page'.