USER MANUAL

System L3

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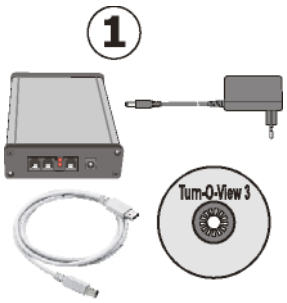
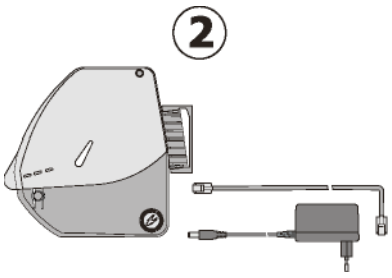
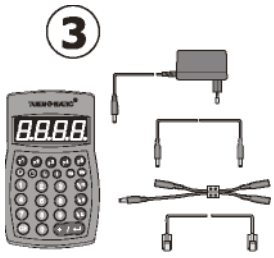
PRODUCT CONFIGURATIONS

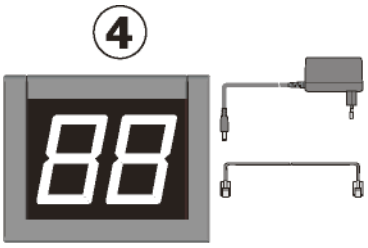
1. **START Pack L3**: One required per system. Includes System Controller SC900, Power Supply, USB Cable and Turn-O-View 3 Software.
2. **PLUS Pack Dispenser D900A3**: One required per Service Type, max. 5 per system.
3. **PLUS Pack K900**: One required per Service Position, max. 30 per system.
4. **PLUS Pack Indicator**: One required per Service Type. Available in different configurations including 3-digit Indicators.
5. **Expansion option**, PLUS Pack SL900x2 for guiding customers to calling service point and for Alert Signal.

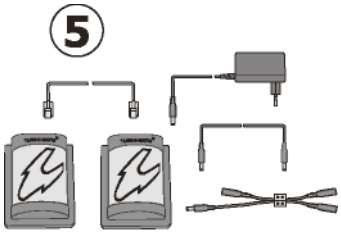
All PLUS Packs include necessary power supplies and TOM-Net data cable.





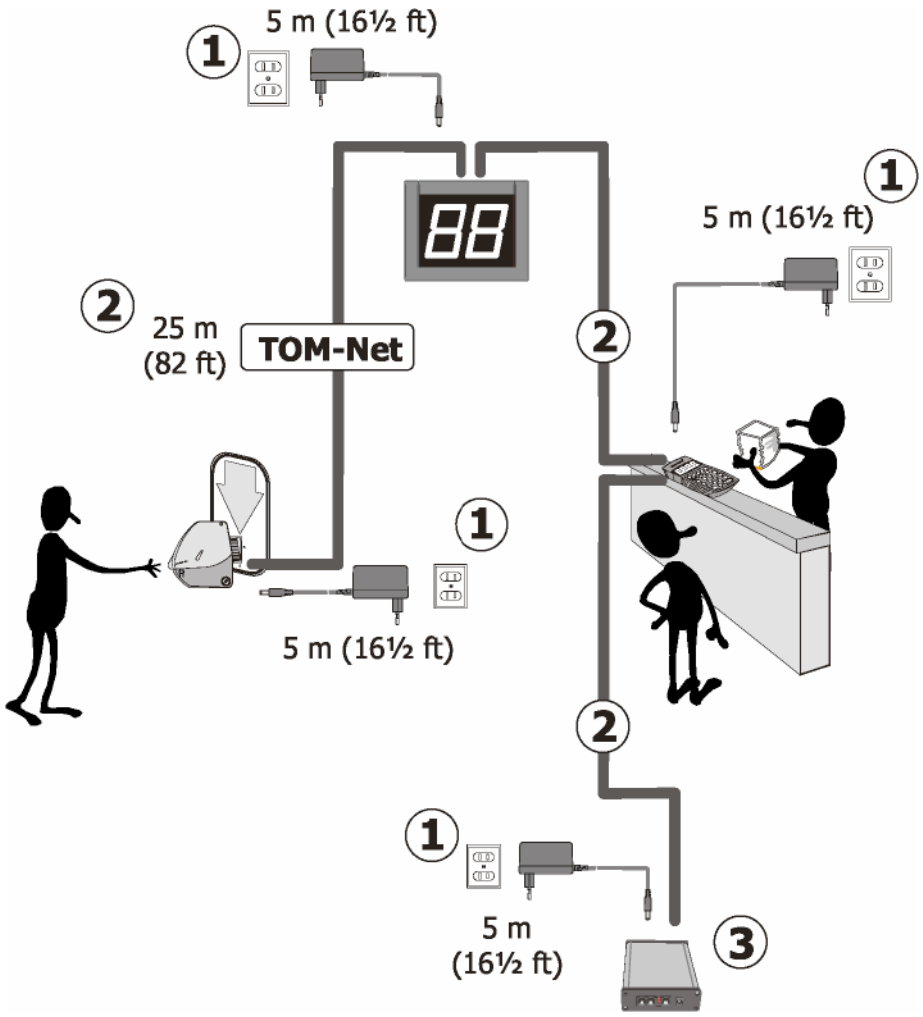






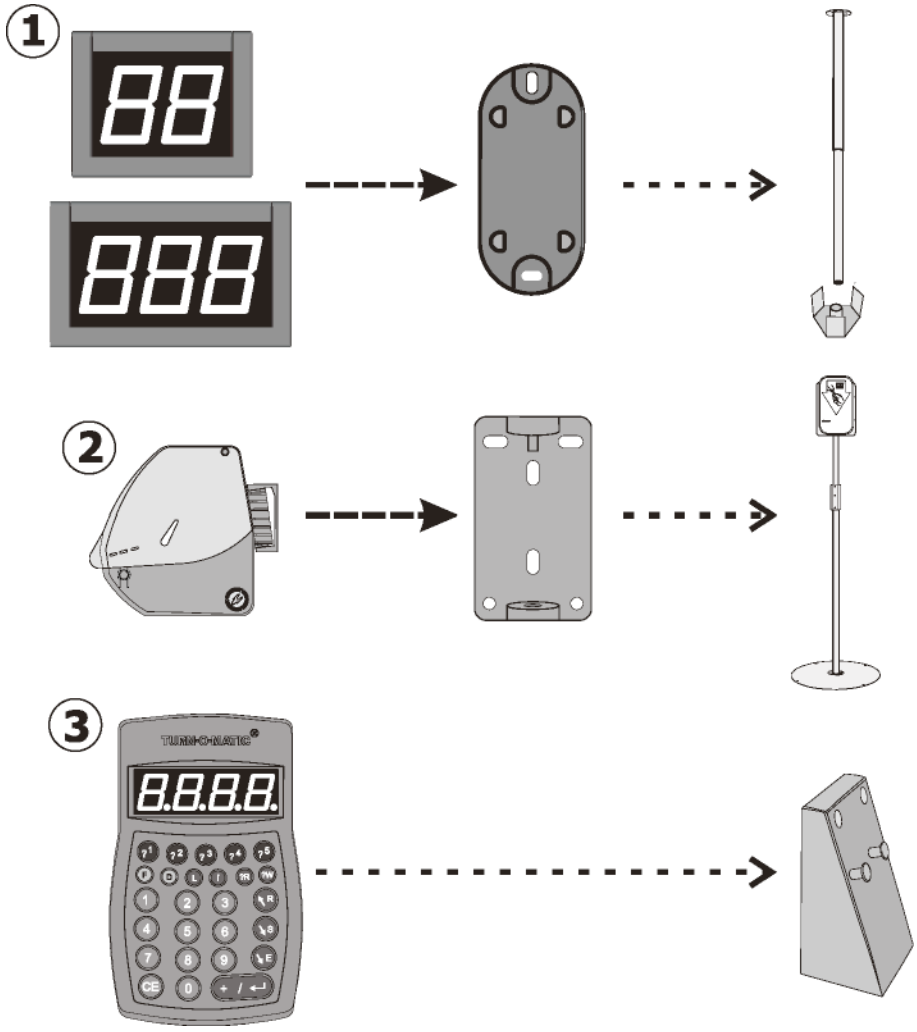
SYSTEM L3 LAYOUT PLANNING

1. Every unit requires 12 VAC power. System packs contain plug-in power supplies with a 5m (16-1/2 ft.) long cable reach from the nearest mains power outlet. PLUS Packs for Indicators, K900 and SL900 contain power extension connectors and cable for connecting multiple units to a power supply – see the User Manuals for these packs for more information.
2. Every unit must be daisy-chain linked to the TOM-Net network. PLUS Packs include 25m (82 ft.) long plug-in data cables for this
3. The System Controller SC900 should be placed in the office area near to the customer PC or network server.



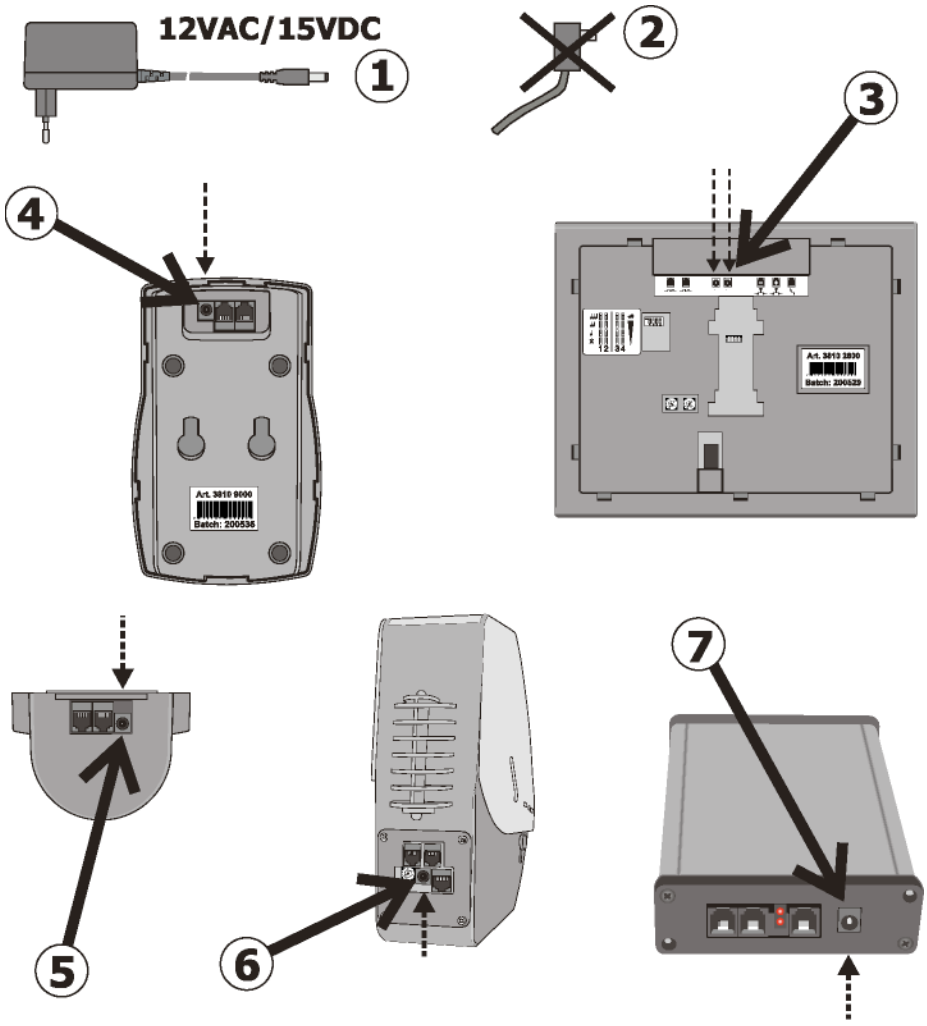
MOUNTING BRACKET FIXING AND OPTIONS

1. Indicators include a mounting bracket, plus expander plugs and screws for wall fixing. *See the Indicator User Manual for details.* Option mounting: Indicator Ceiling Bracket.
2. Dispensers include a mounting bracket, plus expander plugs and screws for wall fixing. *See the Dispenser User Manual for details.* Option mounting: Dispenser Floor Stand (one Dispenser per Floor Stand). To run cables inside the Floor Stand, use the Collar for D900A Dispenser. Note: Floor Stand telescope function is disabled with this collar.
3. K900 units are placed on a counter-top or desk without a mounting bracket. Option mounting: Wall holder for vertical wall placement.



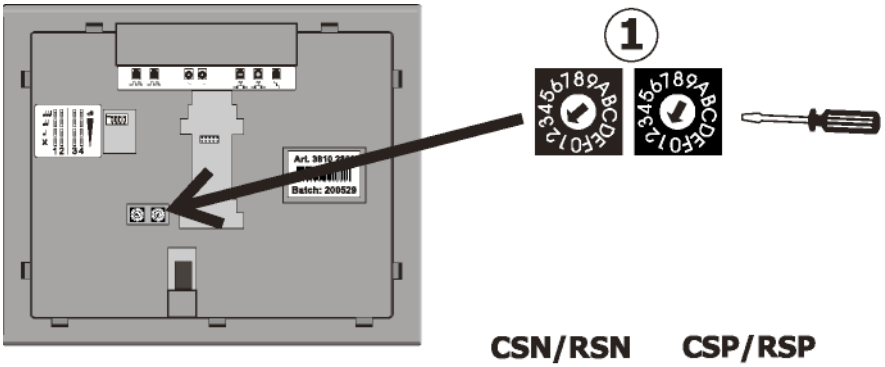
POWER CONNECTIONS

13. Power to all TOM units: 12VAC or 15VDC external power supply, 2.5mm DC plug connection.
14. **DO NOT USE V2 RIGHT ANGLE PLUG OR OTHER IMPROPER DC PLUB TYPES THAT MUST BE FORCED INTO DC JACKS!**
15. Indicator: DC jacks (2) at the top on the back.
16. K900: DC jack on the bottom.
17. SL900: DC jack on the top.
18. D900A3: DC jack on the back.
19. SC900: DC jack on the end.

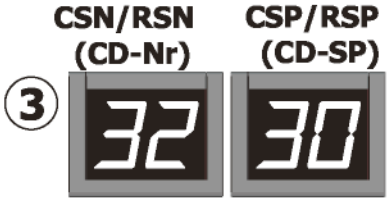


Indicator TOM-Net Address Setting

1. Disconnect power to the Indicator. Use a small screwdriver to rotate address switches to the needed setting.
2. Indicator displaying Called Service Number (**CSN**) or Recalled Service Number (**RSN**) per Service Type (**ST**).
3. Customer Direction display including Calling Service Position (**CSP**) or Recalling Service Position (**RSP**) number.
4. Service Position displays of **CSN / RSN**.
5. Information displays: **HCW** = Help Customers Waiting
   AWT = Advised Waiting Time
   DSN = Dispensed Service Number
   HSP = Help needed at Service Position



CSN= **C1**... **C5**(ST=A...E)
RSN= **CA** ... **CE** (ST=A...E)



CSN= **C1** ... **C5** (ST=A...E)
CSP= **D1** ... **D5** (ST=A...E)
RSN= **CA** ... **CE** (ST=A...E)
RSP= **DA** ... **DE** (ST=A...E)

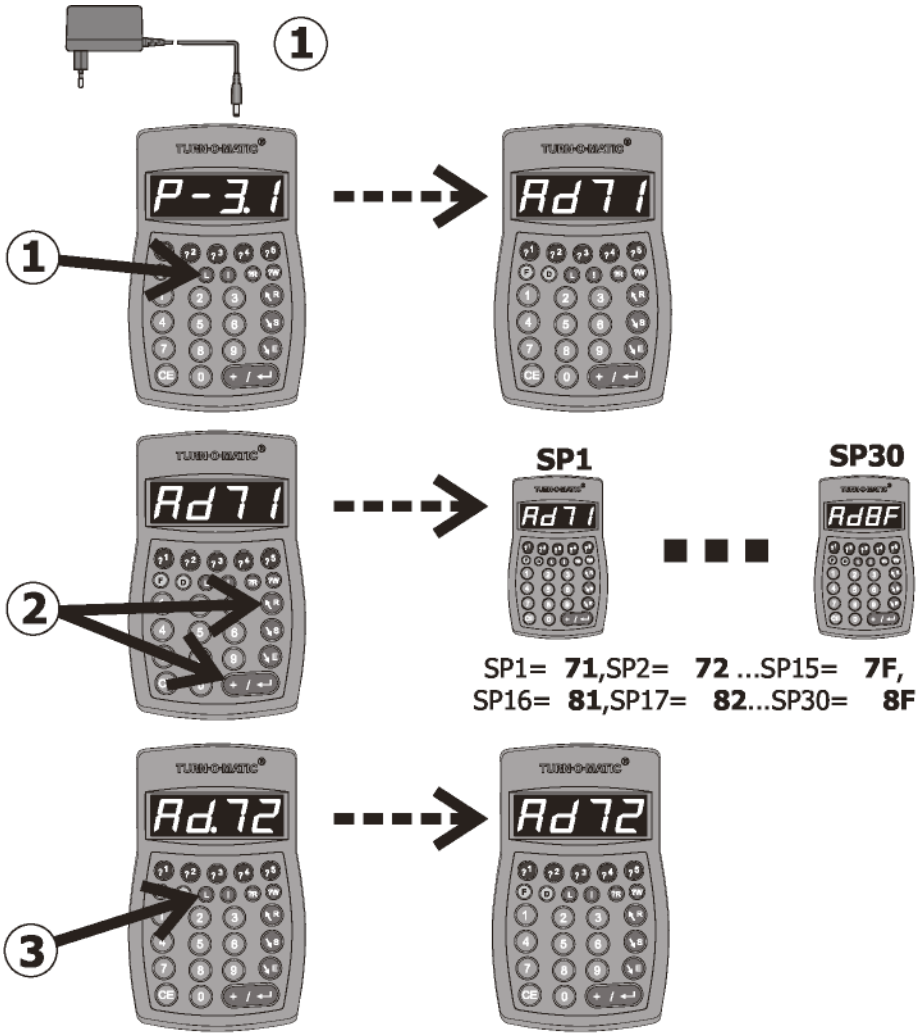
SP1 = **51,** SP2 = **52 ...** SP15 = **5F,**
SP16 = **61,** SP17 = **62 ...** SP30 = **6F**

HCW = **BA ... BE** (ST=A. .. E)
AWT = **3A ... 3E** (ST=A. .. E)
DSN = **31 ... 35** (ST=A...E)
HSP = **B9**

K900 TOM-NET ADDRESS SETTING

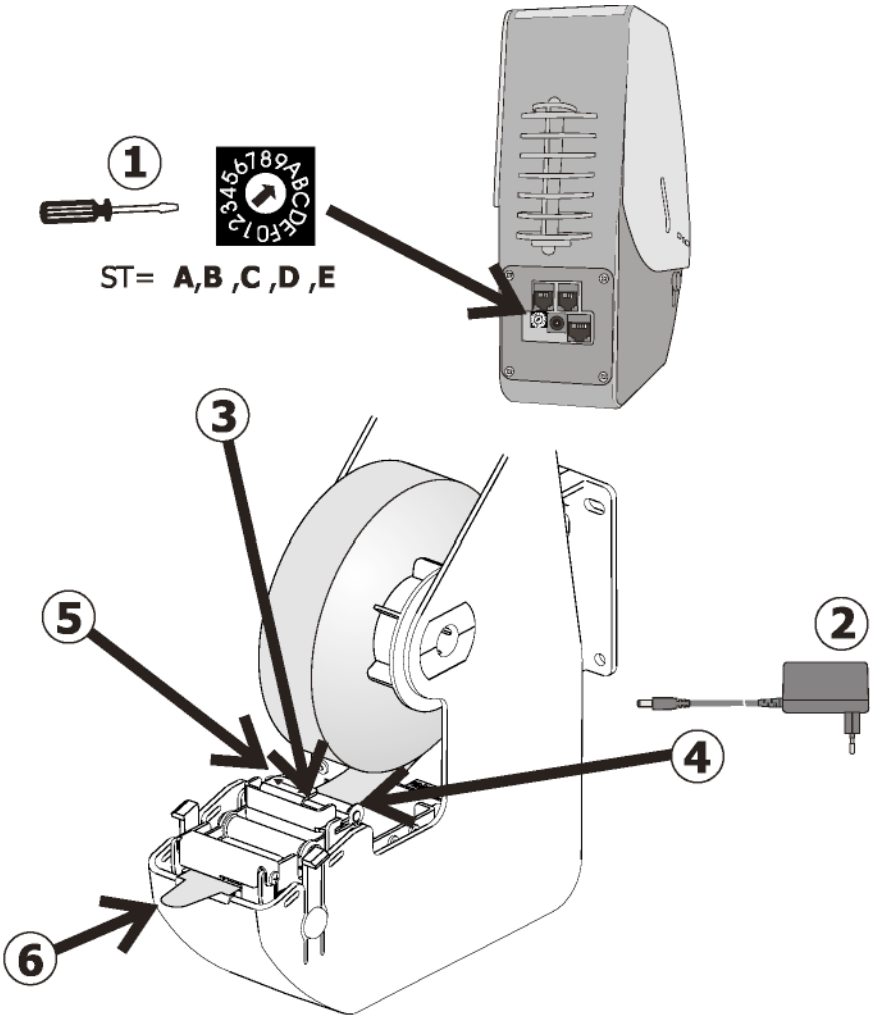
Another ' ?

10. Plug in power to the K900. During the K900 start-up sequence, hold down the **L** key 3+ seconds. The K900 will enter the address setting routine and display the currently set address as 'Ad xx where xx = address.
11. Press the **ENTER** key to change the address +1 or the **R** key to change address -1. Set the address to one of the SP addresses noted (no duplicates allowed).
12. Hold down the **L** key 3+ seconds to save the new address setting (example 72). Remove power from the K900. On restart, the K900 will start up with the new address.



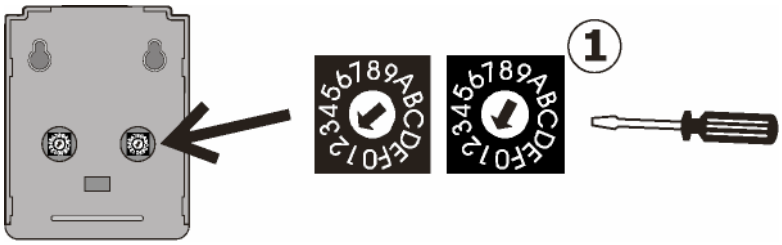
Dispenser TOM-Net Address Setting, Ticket Roll Loading

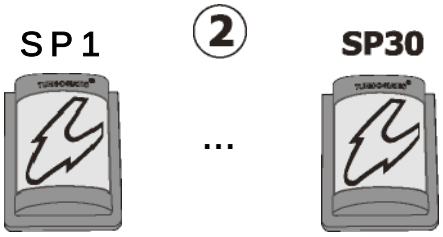
1. Use a small screwdriver to rotate the address switch to the needed setting for the Service Type.
2. Connect power to the Dispenser.
3. Be sure the ticket feeder is closed. Push down on the feeder latch and slide it to the right to close the feeder.
4. Set the ticket roll in the holders, remove any tickets with glue or torn edges and **insert the first ticket under both the back roller and feeder entry guide.**
5. Press the manual feed switch to feed the ticket strip through the feeder.
6. **Before closing the cover, take a ticket for the starting ticket number.**



SL900 TOM-Net Address Setting

7. Use a small screwdriver to rotate address switches to the needed setting.
8. Service Point marking lamp to guide called customers to the calling Service Point.
9. Alert Signal lamp for HCW (Help Customers Waiting).





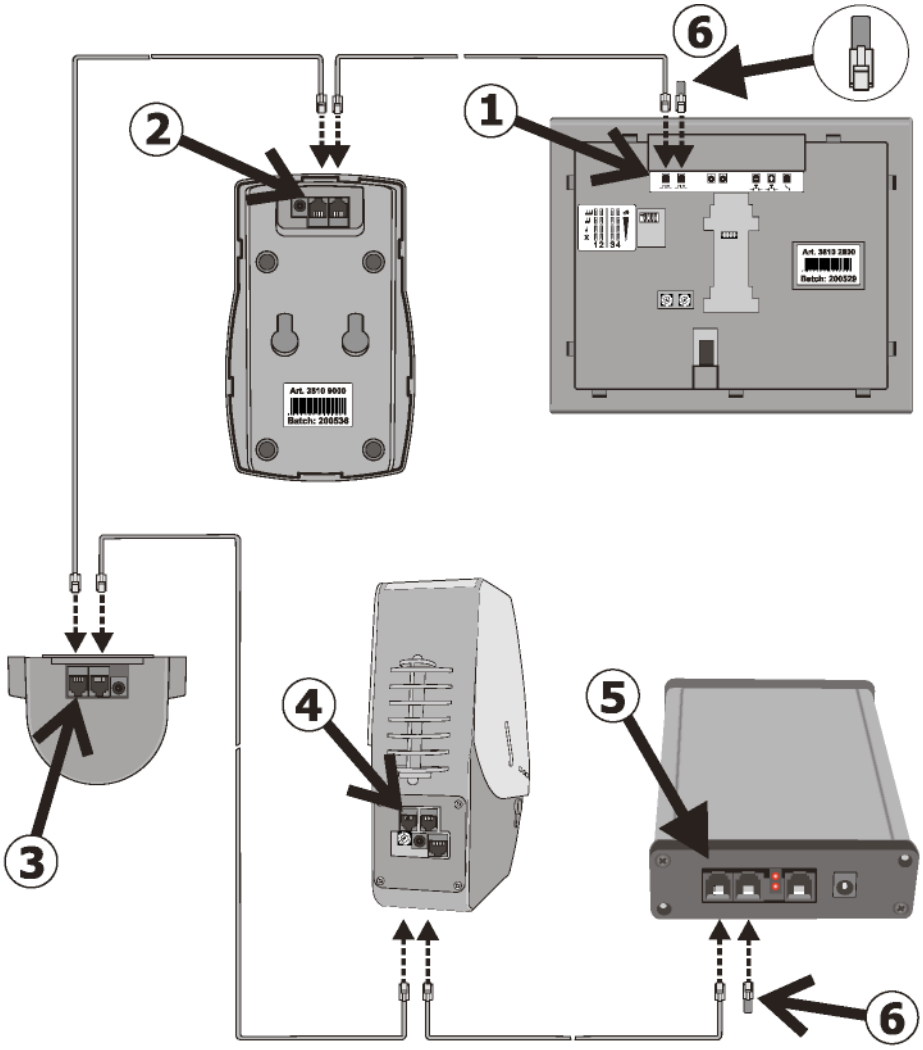
SP1 = **91,** SP2 = **92 . ..** SP15 = **9F,**
SP16 = **A1,** SP17 = **A2 ...** SP30 = **AF**

HCW = **B1 ... B5** (ST A ...

TOM-Net Data Connections

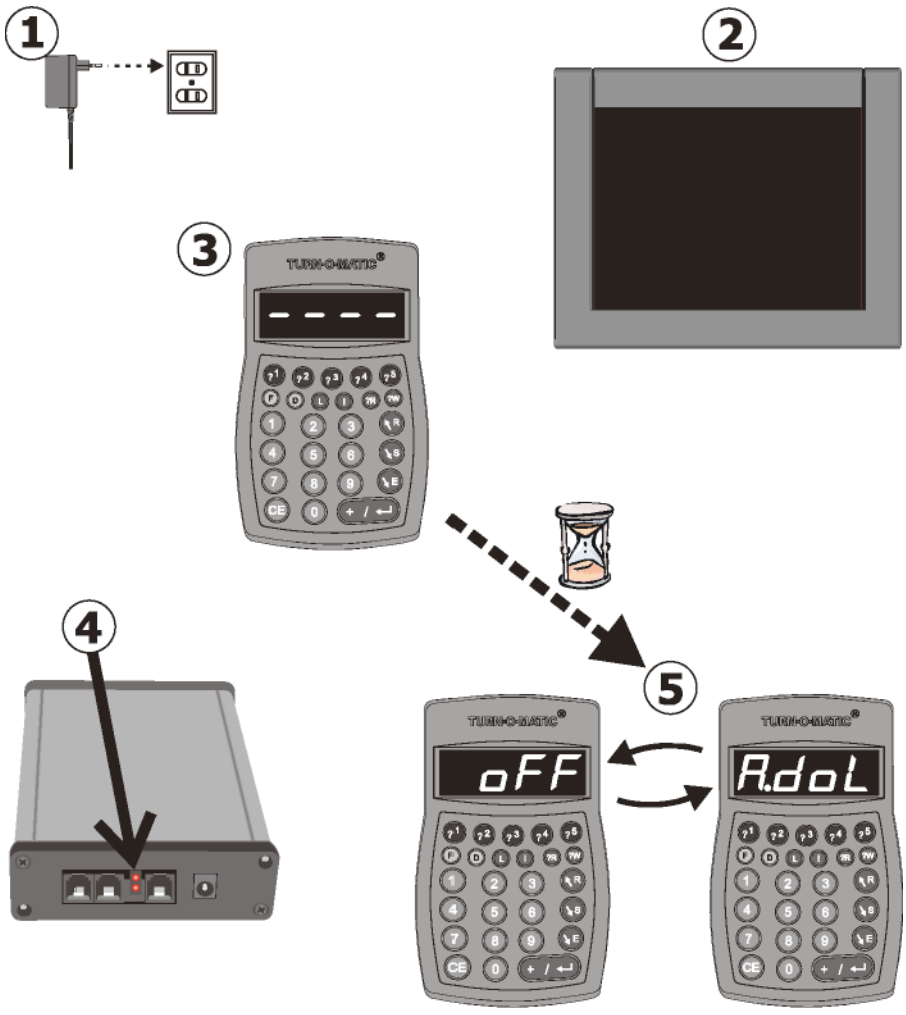
Plug in data cables to each unit on the TOM-Net network to join units together in a serial chain as shown. Every unit has two RJ10 data ports:

1. Indicator, back side at the top.
2. K900, bottom.
3. SL900, top.
4. D900A3, back side of the dispenser.
5. SC900, two ports to the left of the LEDs on the power connection end.
6. Plug in TOM-Net terminators in the empty data ports on the first and last units on the network chain. These prevent data signal echos.



System Start-Up

1. Plug power supplies into mains outlets for all units, **with the SC900 last.**
2. Indicator display sequence: **P- … 32** (program version)
   ... Ad …XX (TOM-Net address)
   … Blank screen.
   If **'EA … XX … EA …'** is displayed, XX = invalid address. Set Indicator to a valid address and restart.
3. K900 display sequence: **P-3.2 … Ad.XX … ----.** If **'EC'** is displayed, check for duplicate address setting, correct and restart.
4. SC900 operation LED starts blinking.
5. After about 30 seconds, the SC900 identifies K900 units which then display **'oFF'** if first start, or **'X.---'** if restart, alternating with **'X.doL'** (dispenser off-line) where X is Service Type. To set the start number, first log into the dispenser ST (*see next page*).

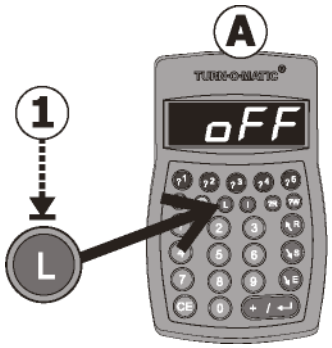


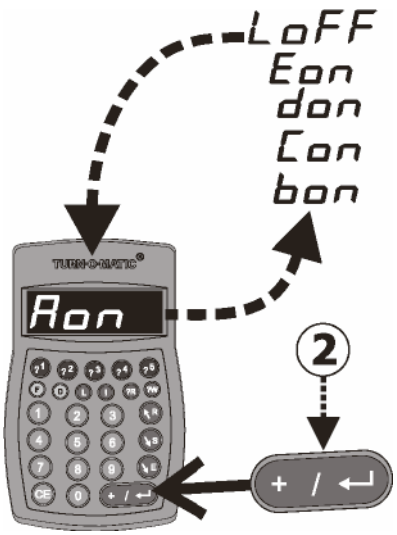
Log On K900 To A Service Type

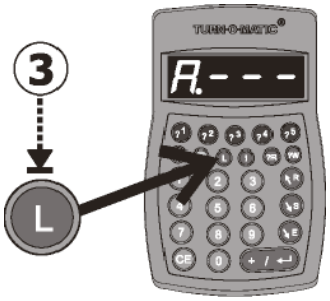
A K900 needs to be logged on to a Service Type (ST = A, b, C, d or E) for these cases:

A. First start or K900 has been logged OFF.
B. User needs to log on to another ST.

1. Hold down the L key for 3+ seconds to open the logging routing.
2. The K900 will display a logging selection. Press the ENTER key to display the next selection. Each ENTER key press will display the next selection, moving through logging on to A, b, C, d, E or logging OFF.
3. With the desired selection displayed (ex. 'Aon', to log on to Service Type A), hold down the L key for 3+ seconds to complete logging. The K900 will display the logged on Service Type ready for input.

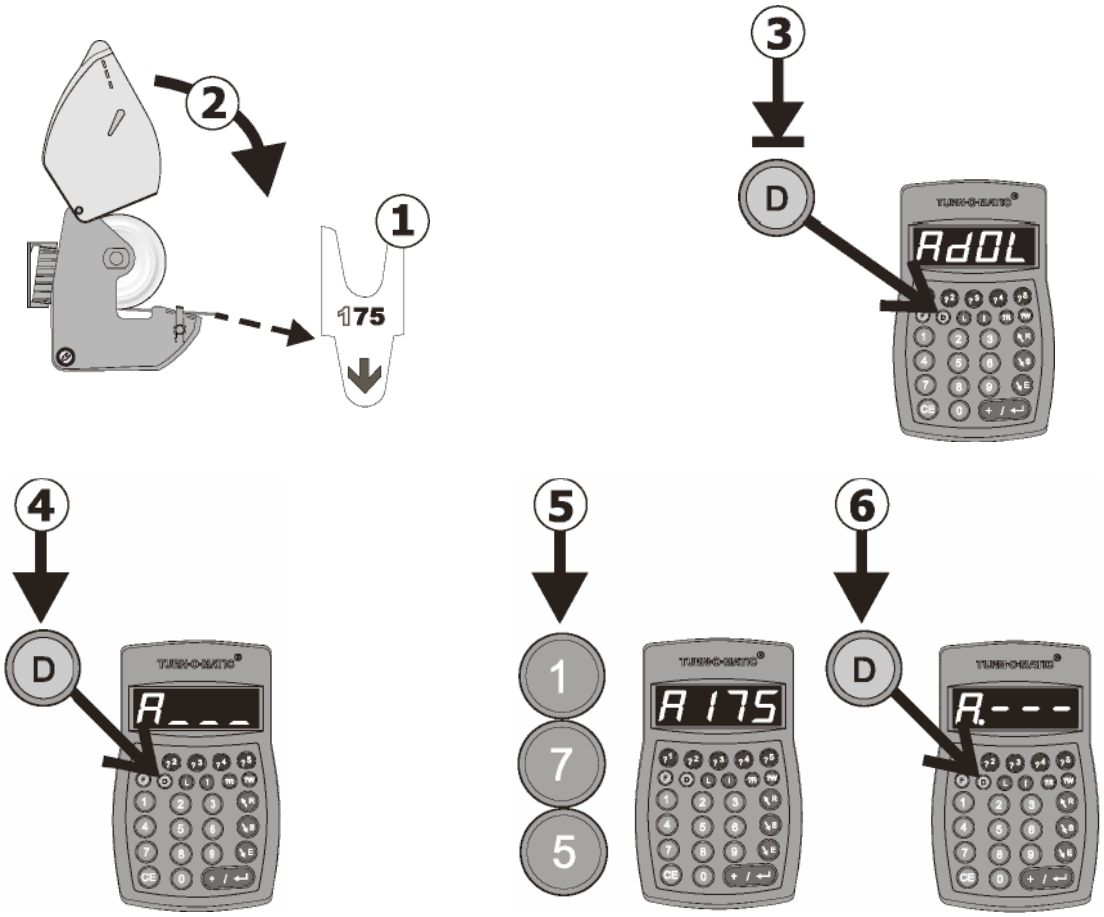






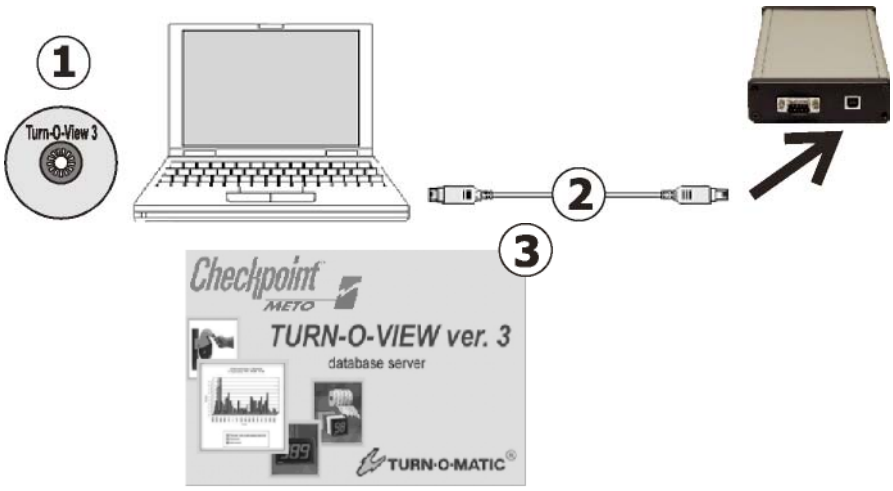
Dispenser OFF-Line ~ Set Starting Ticket Number

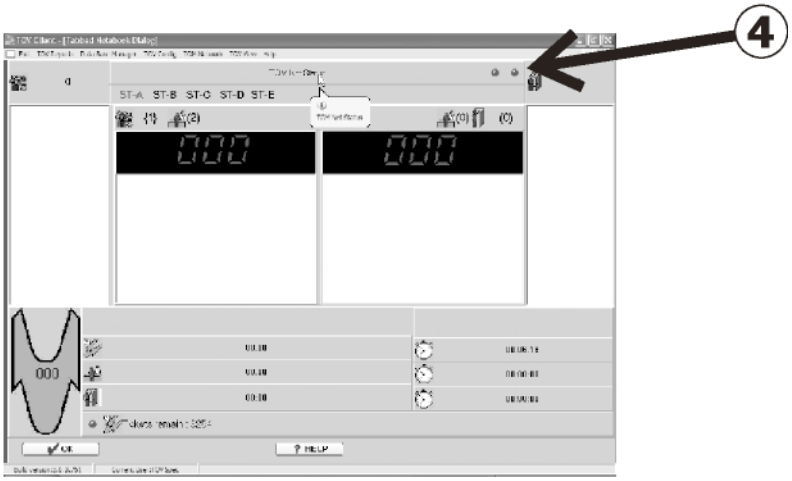
1. After setting in a ticket roll, take a ticket **WITH THE DISPENSER COVER OPEN.**
2. Close the dispenser cover after taking a ticket. Tickets now taken are saved in the dispenser buffer.
3. On system startup, the message '$dOL' is displayed on K900 units, showing that the $ (Service Type A…E) dispenser is Off-line (Ex. ST=A). **To take a dispenser Off-line manually for changing ticket roll, press and hold the D key for 3 seconds.**
4. With '$dOL' displayed, press the D key on a **K900 that is logged on to the same Service Type.** The K900 displays '$_ _ _ *' (ex. 'A* _ _').
5. Key in the start ticket number (ex. '175').
6. Press the D key. The K900 now will display the Service Type ready for input.



Downloading Statistics With Turn-O-View

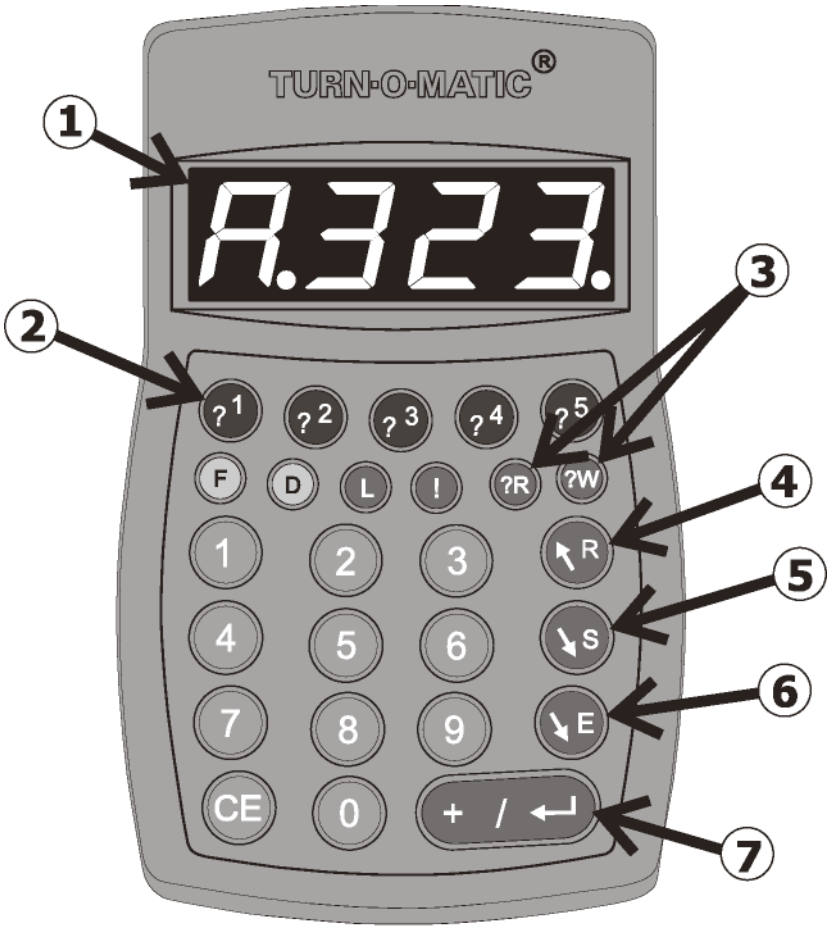
1. Install both TOVserver and TOVclient on a PC or network server that will be connected to the L3 system.
2. Connect the USB cable between the SC900 and the PC or server. Install the SC900 USB drivers located in the **\Program files\PDM\COMPORT** folder.
3. Run **TOVserver.** While the TOVserver window is open, TOV3 is downloading system information and statistics data from the SC900. This may require several minutes if there are many new statistics records since the last download (SC900 can hold 50,000 records).
4. After the TOVserver window closes, run TOVclient. For a system check, open **TOV Reports / LIVE LINK.** Both LED symbols at the top right are green if TOV is connected to both the SC900 and the TOVserver database.





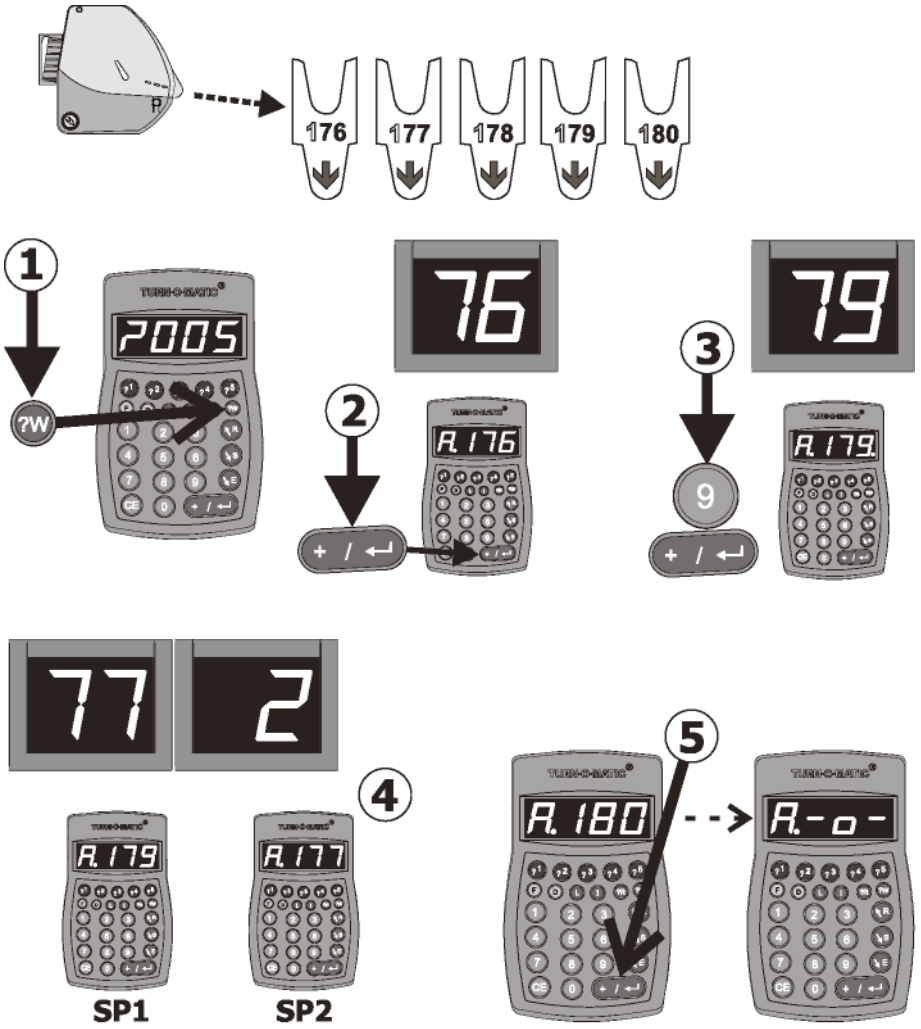
K900 Operation Display And Keys

1. Logged in Service Type and last called number.
2. **?1 … ?5** keys, mark number with Inquiry Type in statistics data (option setting – mark and end as NO SHOW).
3. **?W** and **?R** keys, show number of customers waiting for first service and recall service. Revert to original display after 3 seconds.
4. **R** key, scroll recall number list.
5. **S** key, save displayed number for recall.
6. **E** key, end service for displayed number.
7. **ENTER** key, call next number sequentially or calls keyed in (selected) number.



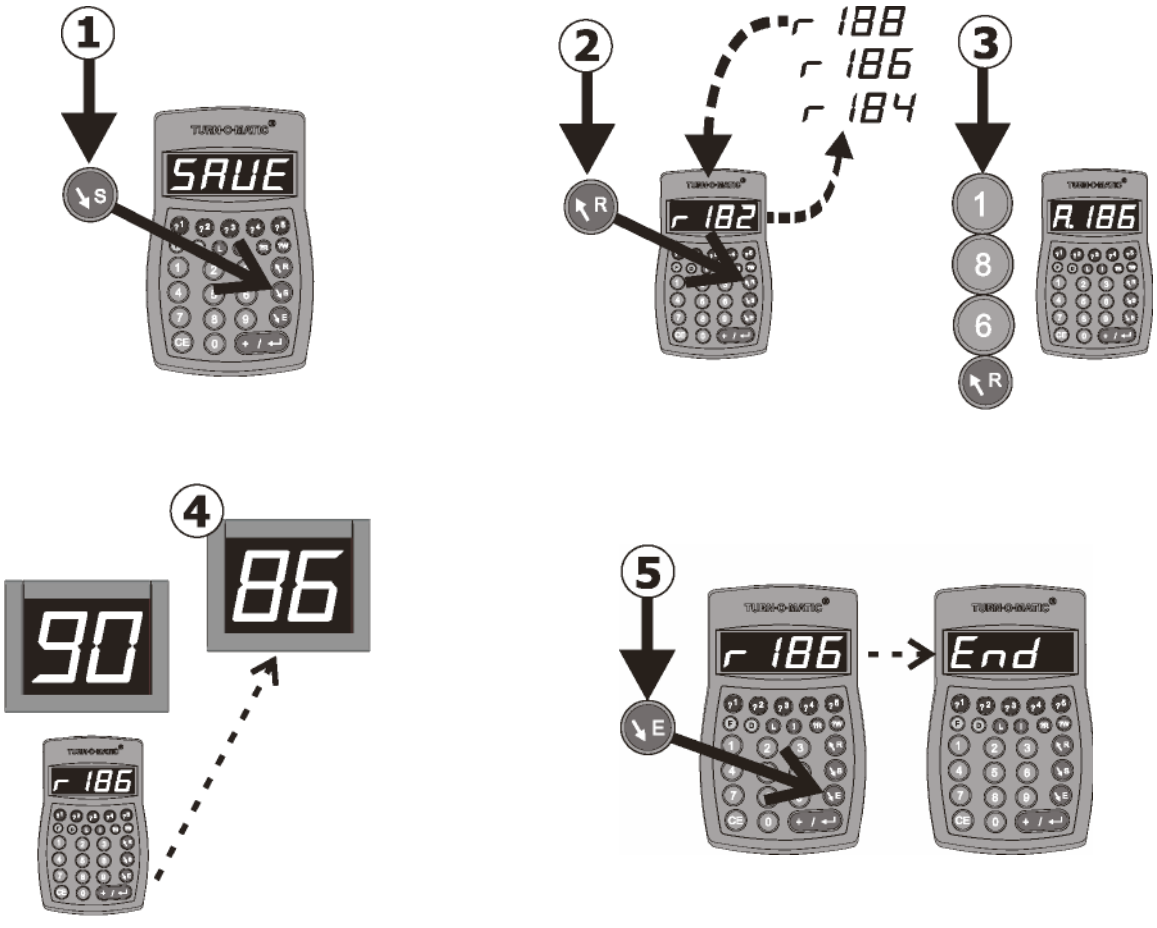
Arriving Customers ~ First Call Service

1. Taken tickets are registered as waiting customers. Press the **?W** key to see number of customers waiting. The original display returns after 2 seconds.
2. Press the **ENTER** key to call the next customer in sequence.
3. To make a selected call, key in the number and press **ENTER.** The K900 fills in the displayed number so only the last digits need to be keyed in (ex. Keying in '9' changes '176' to '179'). **TIP: Select call a previously called number to complete service for the number without calling a new number.**
4. With parallel service points, the Customer Direction indicators display both the call number and the calling Service Point.
5. If the last customer has been called or a previously called number is called again, pressing **ENTER** WILL DISPLAY '-o-'.



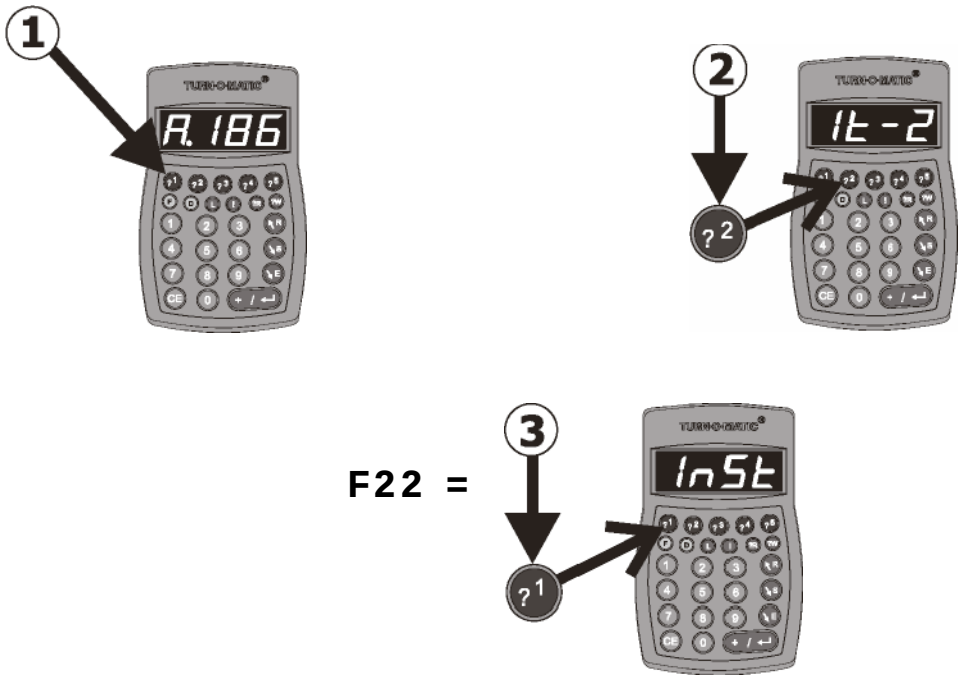
Saving Customers, Recalling ~ Ending Saved Customers

1. Press the **S** key to save a called customer for recall. Customers are saved for recall in the same Service Type, first call in another Service Type or recall in another Service Type according to the F23 setting.
2. Press the **R** key to display recall numbers. Each **R** key press displays the next number on the recall list. Press **ENTER** to recall the displayed recall number.
3. Alternatively, key in the recall number and press **R** to recall.
4. Recalled numbers are displayed on a separate indicator or on the first call indicator depending on the F27 setting.
5. Customers can also be automatically saved for recall (F24 and F25 settings). If further automatic saves for recall are not required, Press the **E** key to end service.



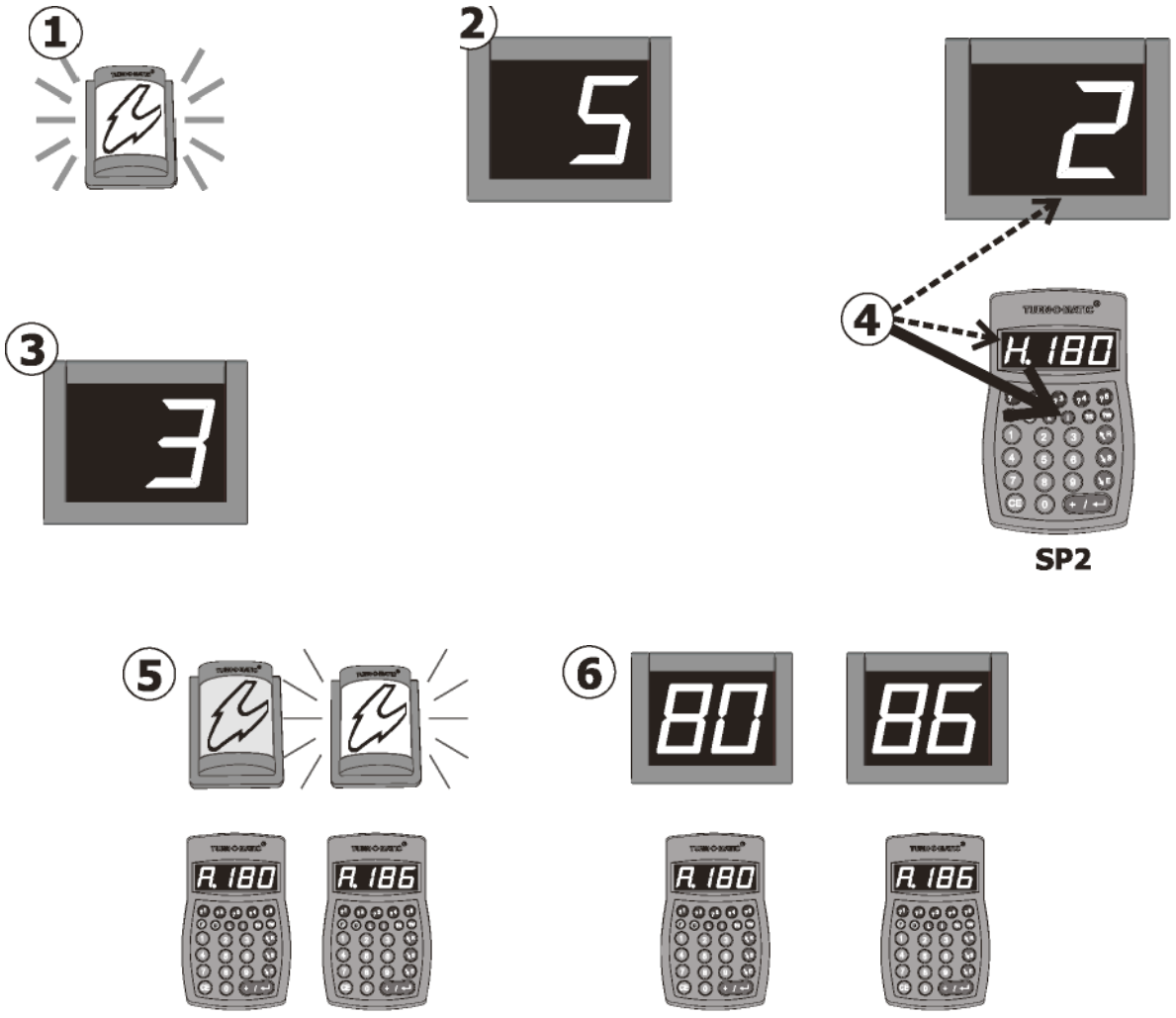
Marking Inquiry Type, Ending Service As NO SHOW

1. The top row of keys on the K900, **?1 … ?5** keys, is used to mark the inquiry type or customer type in the service statistics data.
2. Press one of the **?1 … ?5** keys which corresponds to the inquiry or customer type. The K900 confirms the inquiry type marked (ex. 'It-2') and reverts back to the original display after 2 seconds. Until service is ended, the inquiry type can be changed by pressing another of the **?1 … ?5** keys.
3. A special case for inquiry or customer type is the 'NO SHOW' customer, i.e. does not appear for service when called. With F22, set one of the **?1 …?5** keys to NO SHOW. Pressing the selected key (ex. **?1**) marks the number as a 'NO SHOW' and ends service.



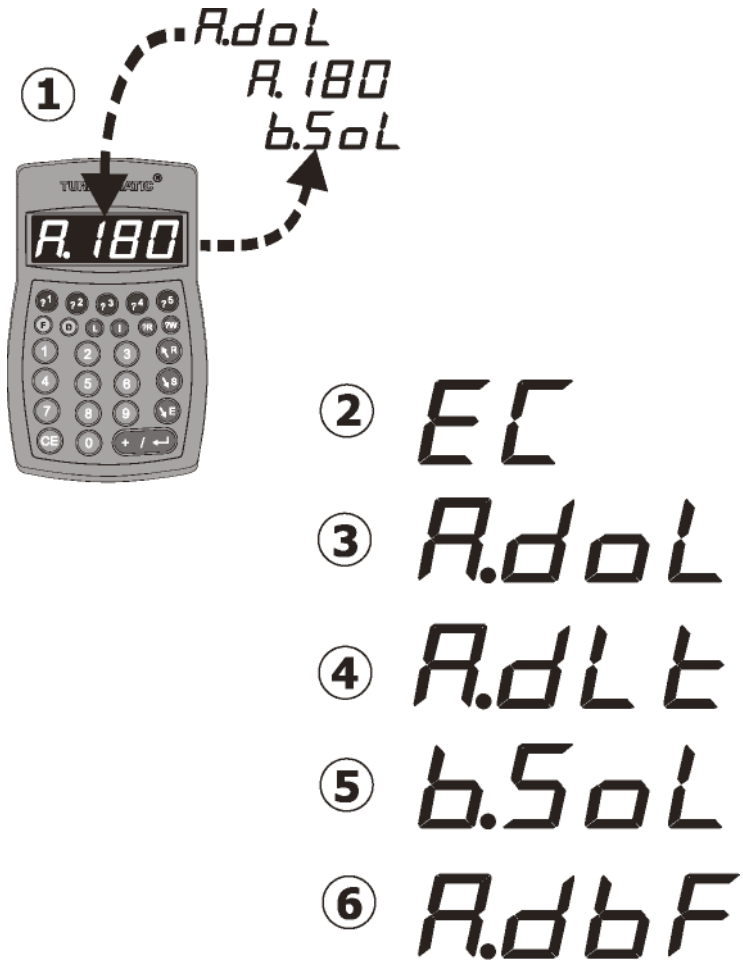
Real-Time Information Options

1. Alert Signal: Lights up when customers are waiting and blinks at level set for customers waiting or waiting time (F30 & F31 settings).
2. Indicator HCW: Displays number of customers waiting or waiting time per the F30 setting.
3. Indicator AT: Displays advised waiting time to customers (average of last 10 customers served). Can be manually set with F42.
4. Indicator HSP: Displays Service Position number when K900 **!** (Attention) key is pressed, blinks SP number when **!** key is held down 3+ seconds. When in HSP mode, K900 displays "H.nnn' and **!** key must be pressed again to exit to normal operation.
5. Service Position (SP) lamps blink to guide customers to calling Service Point.
6. SP indicators display number called to SP.



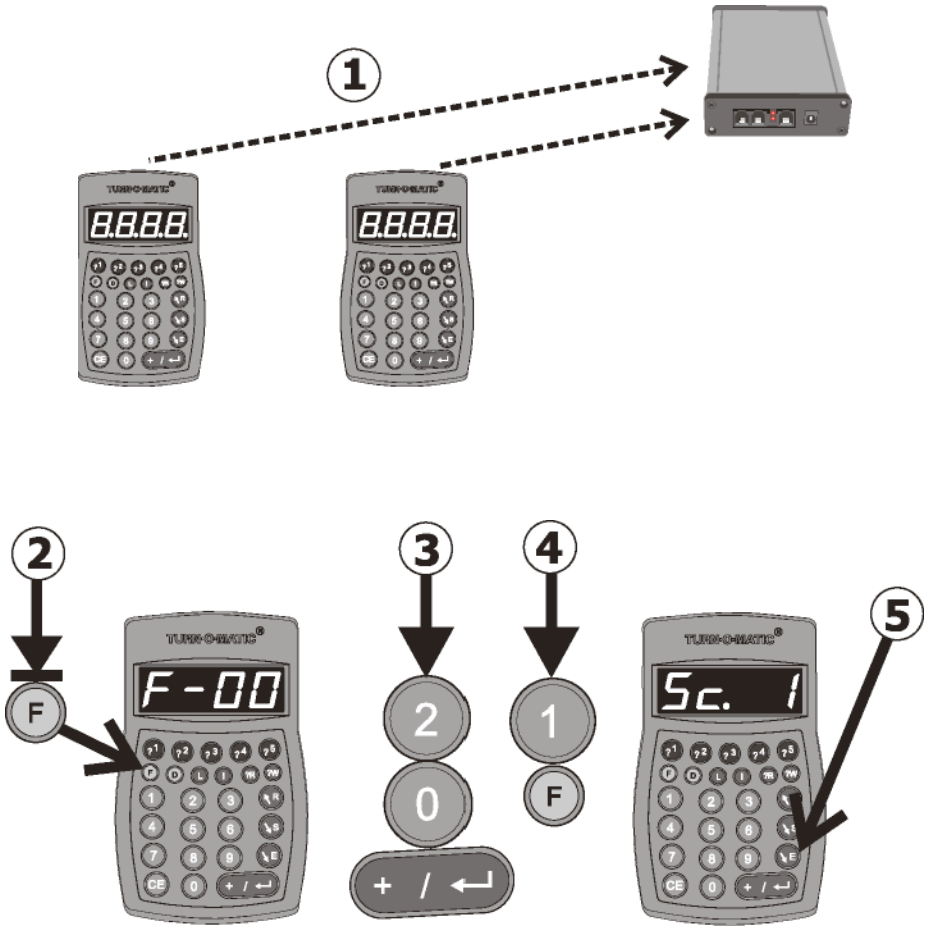
System Messages

1. System messages are inserted in the K900 normal operations display.
2. **EC:** Communications Error that most often occurs if a unit is disconnected from the TOM-Net or restarted. This message can be removed with F 00, see page 30. If it returns, check for faulty connections or units.
3. **$.doL**: Dispenser is OFF-line for **$ = Service Type**, see page 14.
4. **$.dLt**: Dispenser low on tickets. See F43 setting on page 28.
5. **$.SoL**: $ = Customers waiting for first service with no K900 logged on to that Service Type.
6. **$.dbF**: $ = ST active service buffer is nearly full (max. 250 customers waiting for first service or recall). New numbers will overwrite the oldest numbers in the buffer.



System Set-Up From K900

1. System set-up functions can be accessed from any K900 and **in most cases affect only the logged-on Service Type.** Settings are saved in the SC900 and are retained even if power is later turned OFF. Values in **[ ]** are the initial default settings.
2. To open function settings, hold down the **F** key 2+ seconds to display 'F-00'.
3. Key in the function number (ex. 20) and press **ENTER** to open the function.
4. Key in the new setting and press **F** to save. Alternatively, press the **ENTER** key to toggle available setting values and press **F** to save the selected setting.
5. To escape from a function setting without making changes, press the **E** key.



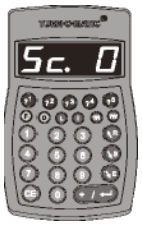
System Set-Up Options

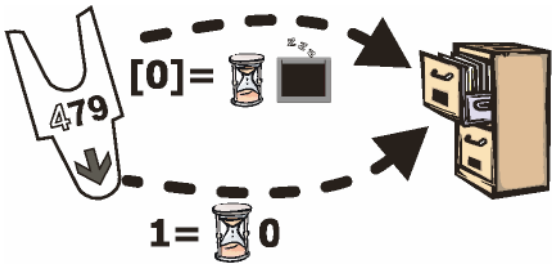
F20. **Time until Auto service end:** [0] = Service ended on Indicator SLEEP setting (F36) or 1 = Service ends immediately when number is called, also sets F24 = 1 (Auto Save). With F20 = 1, service time for all tickets on this Service Type will be 0!

F21. **K900 ENTER key mode:** [0] = Auto, ENTER key press auto Ends / Saves number and calls next number, or 1 = Manual, number must be manually Saved or Ended before ENTER key can call next number.

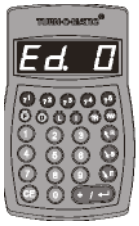
F22. **Activate 'No Show' marking, set to K900 ?1…?5 key:** [0] = 'No Show; marking not active. 1 … 5 = 'No Show' marking active and set to selected **?1 … ?5** key.

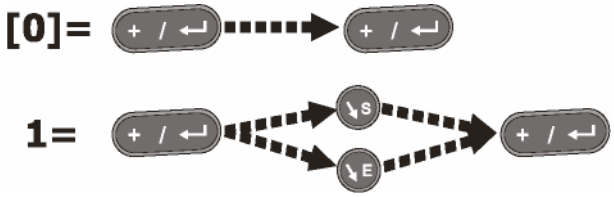
F20



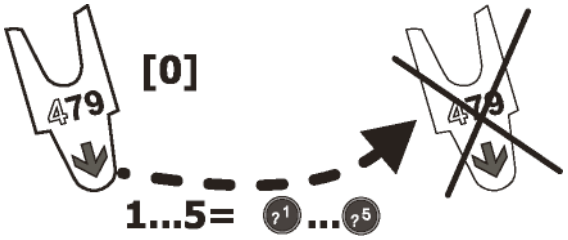


F21





F22

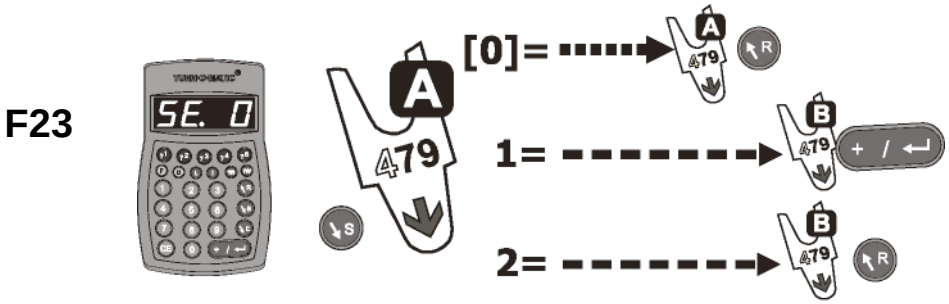


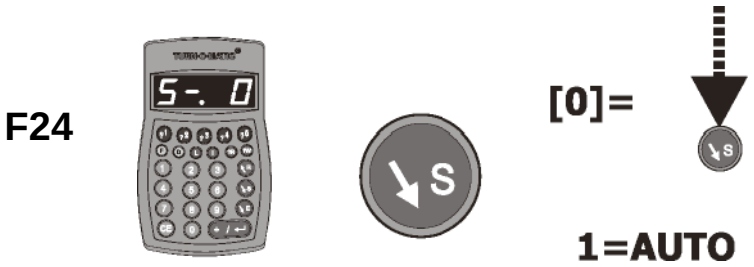
System Set-Up Options *(Continued)*

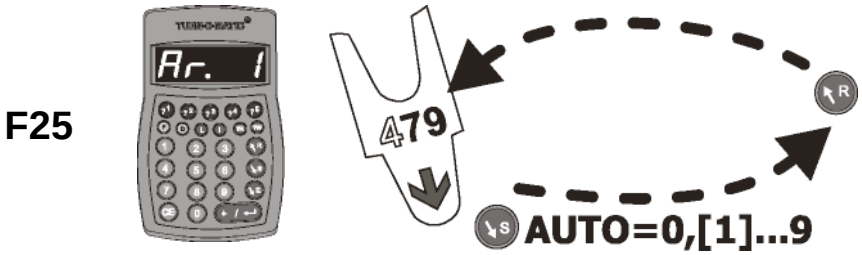
F23. **Save action:** [0] = Save to burrent Service Type (ST) as recall number or 1 = Save to next available ST as first call number or 2 = Save to next available ST as recall number.

F24. **K900 Save mode:** [0] = Manual Save, press **S** key to save displayed number or 1 – AUTO Save, number is saved automatically (also requires F25 Auto Saves for Recall = 1 or more).

F25. **Number of Auto Saves for Recall:** 0 = No Auto Saves, [1] … 8 Auto saves and 9 = Continuous Auto Safes. Service can be manually ended without further auto saves by pressing **E** key when number is displayed on K900.







System Set-Up Options *(Continued)*

F27. Indicator type for displaying Recalled Numbers: [0] = Recalled numbers displayed on Recall indicators (RSN / RSP addresses) or 1 = Recalled numbers displayed on first Call indicators (CSN / CSP addresses).

F30. 'Help Customers Waiting' signal type for SL900 blinking and display on HCW Indicator: [0] = Number of Customers Waiting for service or 1 = Longest waiting time in Minutes or 2 = Longest waiting time in Seconds x 10.

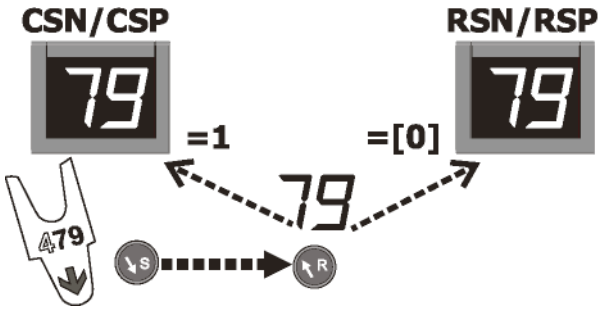
F31. 'Help Customers Waiting' alert signal level: Setting depends on F30 mode setting.

If **F30 = 0:** 1… [8] …99 Customers Waiting.

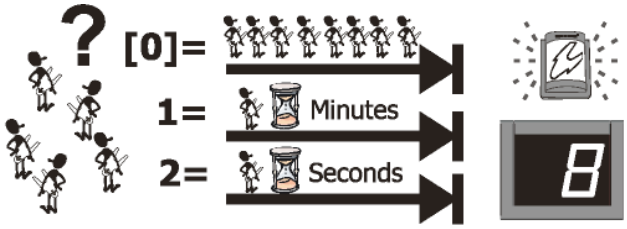
If **F30 = 1:** 1… [5] …99 Minutes waiting.

If **F30 = 2:** 1… [5] …99 Seconds x 10 waiting time

F27



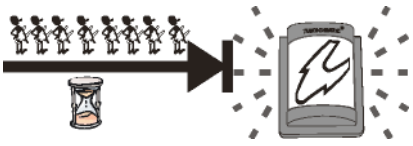
F30



F31

1 … [8] … 9

1 … [5] … 9



System Set-Up Options *(Continued)*

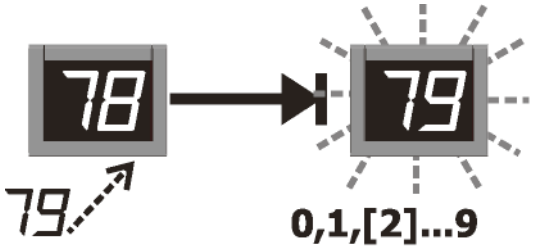
F32. **Number of Indicator blinks on number change:** 0 = no blinking, 1, [2] … 8 blinks or 9 = continuous blinking.

F33. **Indicator update delay on number change:** 00, [01] … 99 seconds.

F34. **Service Position lamp blinking time on number display:** 00… [05] … 60 seconds.

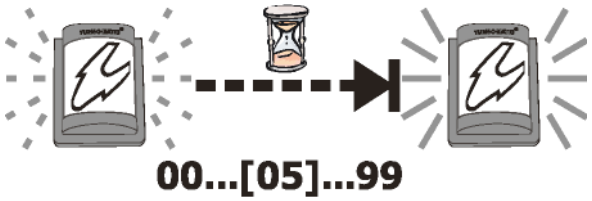
F35. **Service Position Lamp ON time after blinking:** 00… [05] … 60 seconds

F32

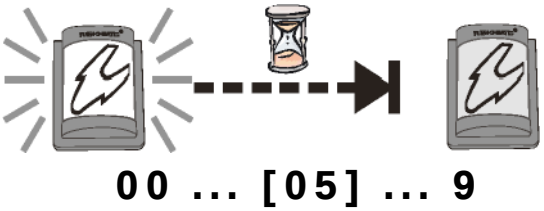


F33

F34



F35



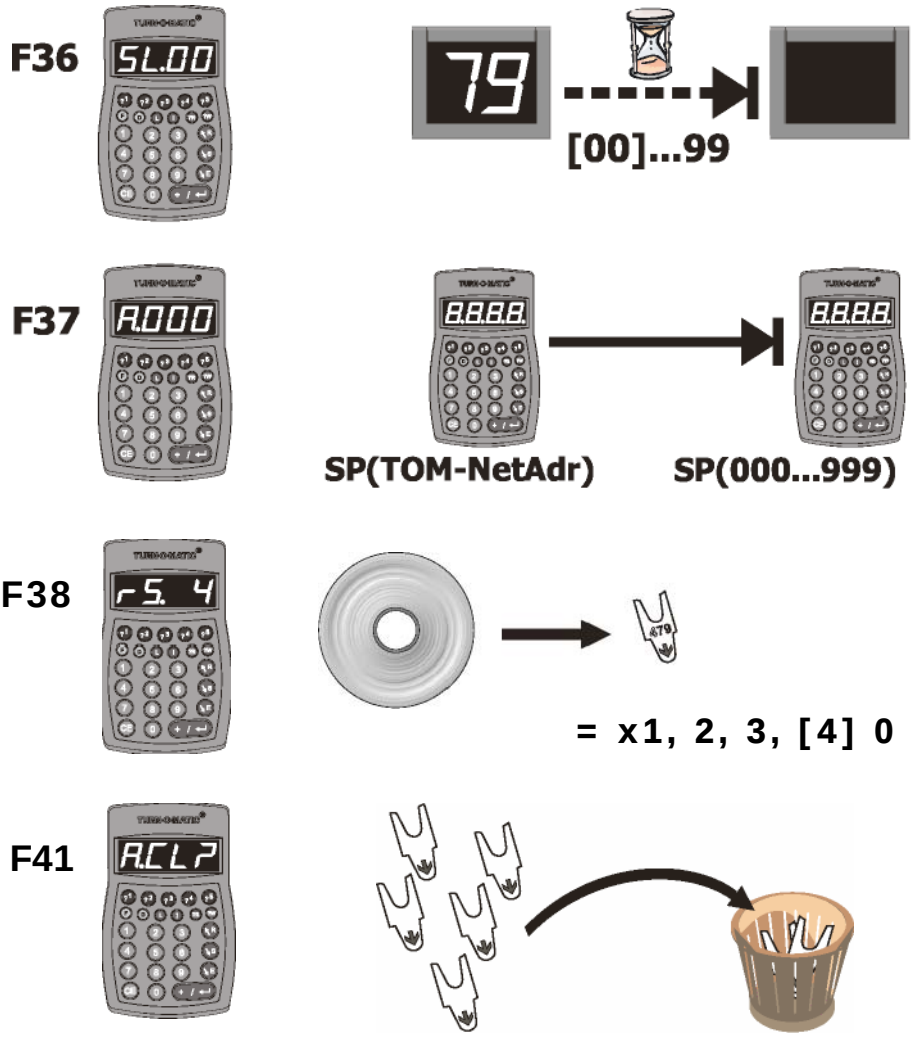
System Set-Up Options *(Continued)*

F36. Indicator SLEEP (switch OFF display) on no activity (gloval setting for all Service Types): [00] (No SLEEP … 99 minutes

F37. Service Position ALIAS number for K900: 000 … 999

F38. Ticket Roll size: 1, 2, 3, [4] x 1000 tickets / roll. Used by F43, tickets remaining alert. NOTE: New setting does not take effect until Dispenser OFF-line is applied.

F41. Clear Service Type buffer, discard open tickets: K900 displays '$.CL?' where $ = Service Type. Press **F** key to confirm or **E** key to cancel.



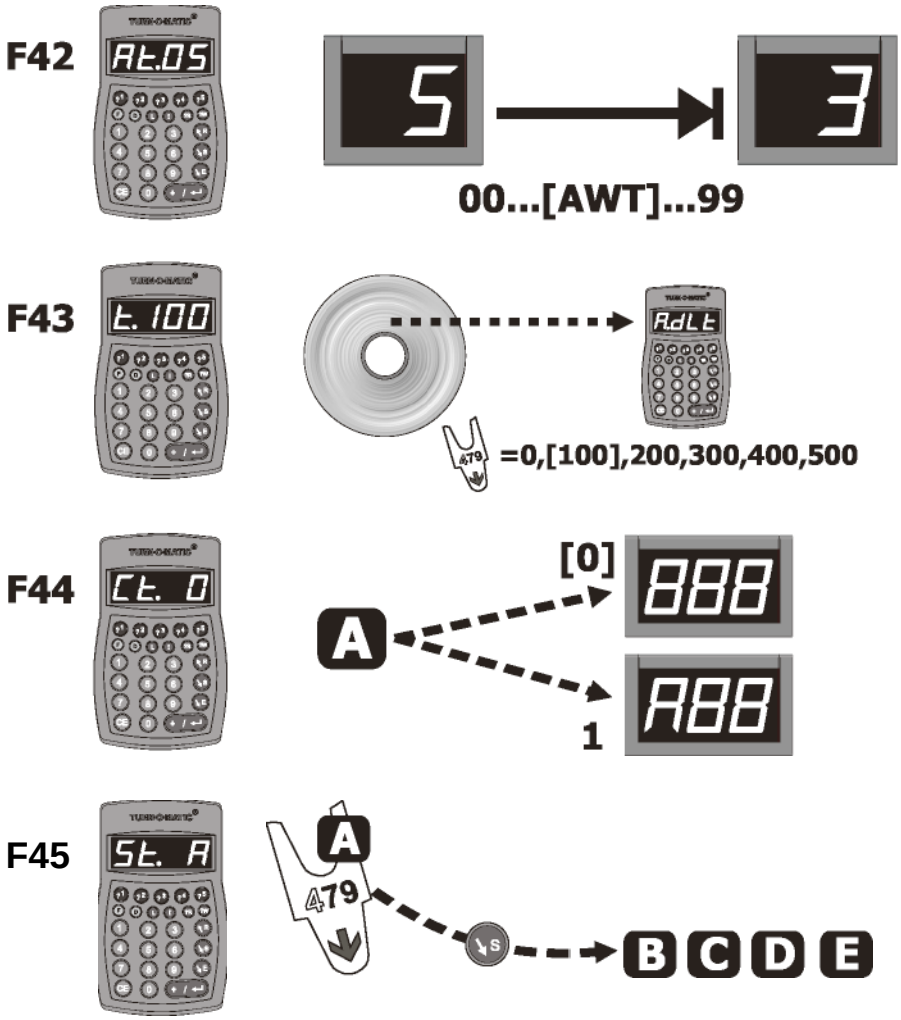
System Set-Up Options *(Continued)*

F42. Change Advised Waiting Time: Sets an Advised Waiting Time that overwrites the system calculated AWT.

F43. Tickets Remaining alert level: 0 (no alert), [100], 200, 300, 400, 500 tickets for $.dLt message.

F44. Display type: [0] = normal 3-digit display of ticket numbers or 1 = merge display Alpha (A, b, C, d, or E) = 2-digit. Sets F23 = 1 (Save to next available ST), next available Service Type destination = F45 setting.

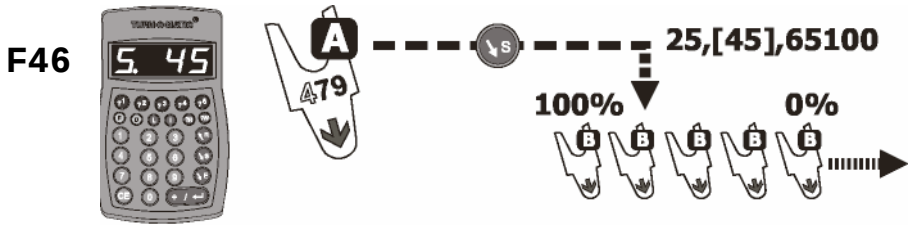
F45. Save Type (Merge-to Service Type): Sets destination Service Type. Requires F44 set to 1 (A/N) for this ST, merge-to ST and 3-digit Indicators for both ST.

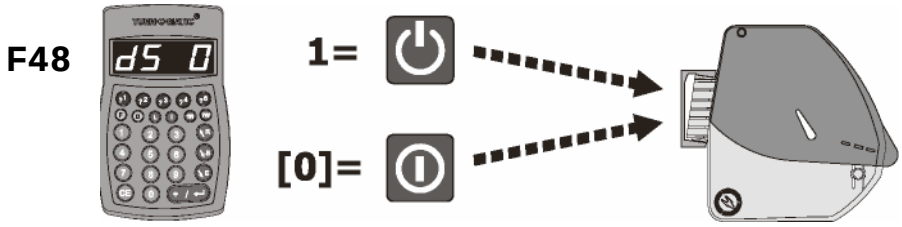


System Set-Up Options *(Continued)*

F46. Save Position (Merge Position): 25, [45], 65, 100 % from Front of waiting ticket line in destination ST.

F48. Switch Dispenser To / From Stand-by (Power OFF / ON): 1 (To Stand-by, OFF), [0] From Stand-by, ON). NOTE: When the Dispenser is switched to Stand-by, power to the ticket feed motor is switched OFF and the last presented ticket is assumed to be taken. Switching from Stand-by switches power to the ticket feed morot ON and the Dispenser resumes normal operation. IF THE DISPENSER COVER IS CLOSED.





System Functions

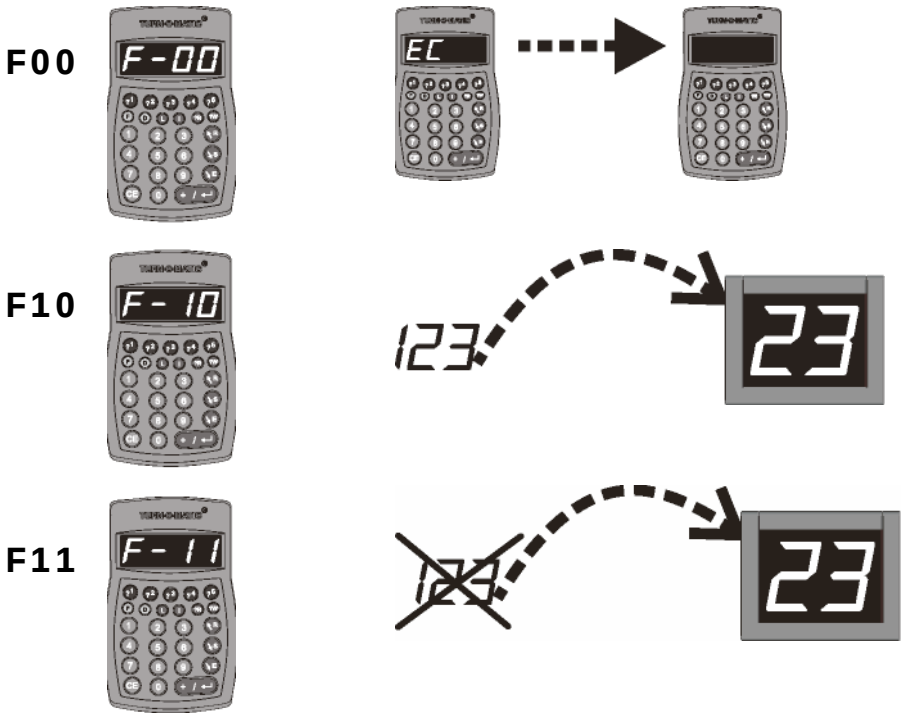
System functions require no input value, only press **ENTER** for selected function number to activate the function.

F00. Clear 'EC' warning message on K900: The 'EC' warning is displayed if there are data communication errors on the system due to hot-swapped units, faulty data cabling, etc.

F10. Start TOM-Net test broadcast: starts broadcast of sequential number series to Indicators until broadcast is stopped with F11.

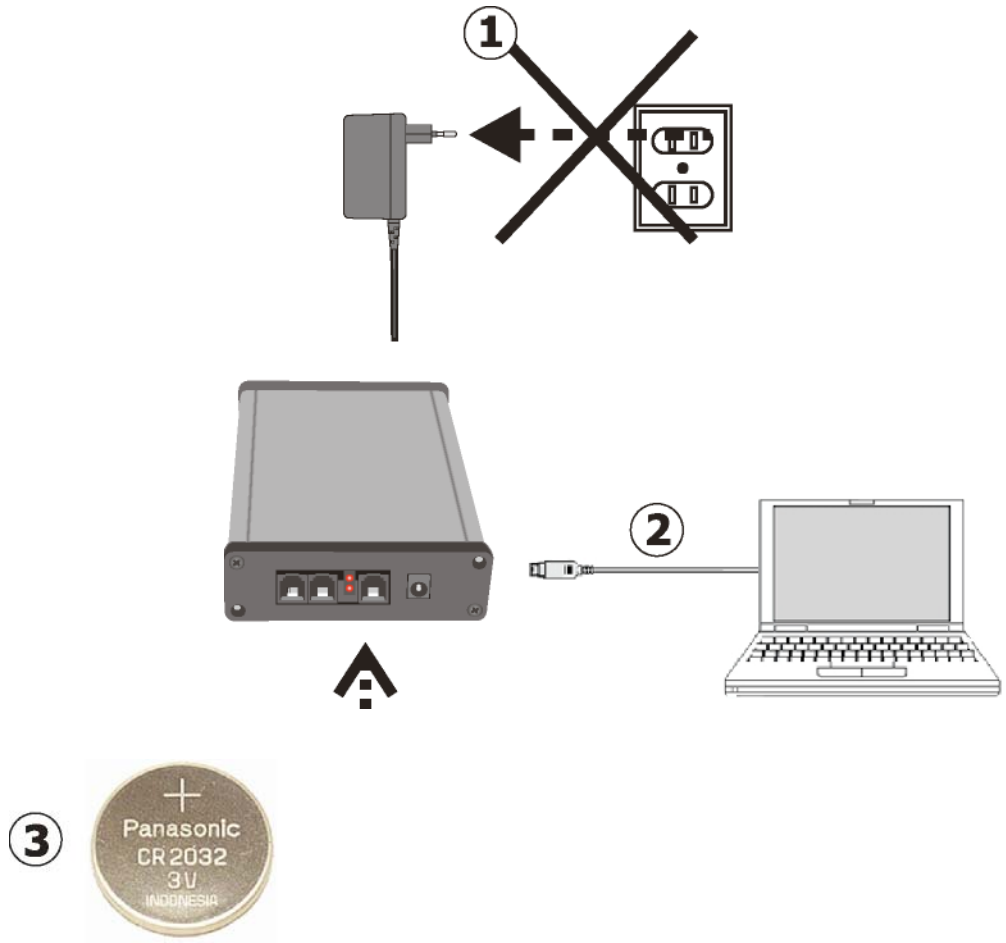
WARNING: USING F10-F11 RESETS THE SYSTEM WHICH DELETES ALL OPEN TICKETS IN SERVICE.

F11. Stop TOM-Net test broadcast.



Operating Guidelines

1. The SC900 saves all settings and service transaction data, which remain even if power is later disconnected. **Power should not be disconnected during operation as a power OFF-ON restart deletes all open tickets (customers waiting for first service or recall service).**
2. The SC900 saves up to 50,000 service transaction records so Turn-O-View 3 is not required to be connected during operation. When connected, TOV3 downloads all data and clears the SC900. This process can take several minutes if the SC900 contains a large amount of uncollected data.
3. The SC900 clock uses a Lithium coin cell, type CR2032, with a minimum expected life of about 3 years. If TOV3 shows an incorrect SC900 date, the battery needs to be changed.



TURN-O-MATIC CONTACT INFORMATION:

CUSTOMER SERVICE:

- **Customer Service**
  SATO LABELING SOLUTIONS AMERICA, INC.
  1140 Windham Parkway
  Romeoville, IL 60446

  Customer Service Toll Free Phone #: (800) 645-3290, Ext. 8
  Customer Service Direct Phone #: (630) 771-4200, Ext. 8
  Customer Service Fax #: (630) 771-4250

TECHNICAL CENTER:

- **Technical Center**
  SATO LABELING SOLUTIONS AMERICA, INC.
  30 Chapin Road, Suite 1201
  PO Box 777
  Pine Brook, NJ 07058

  Technical Center Toll Free Phone #: (800) 205-7611, Ext. 3654
  Technical Center Direct Phone #: (973) 287-3654
  Technical Center Fax #: (973) 227-3961