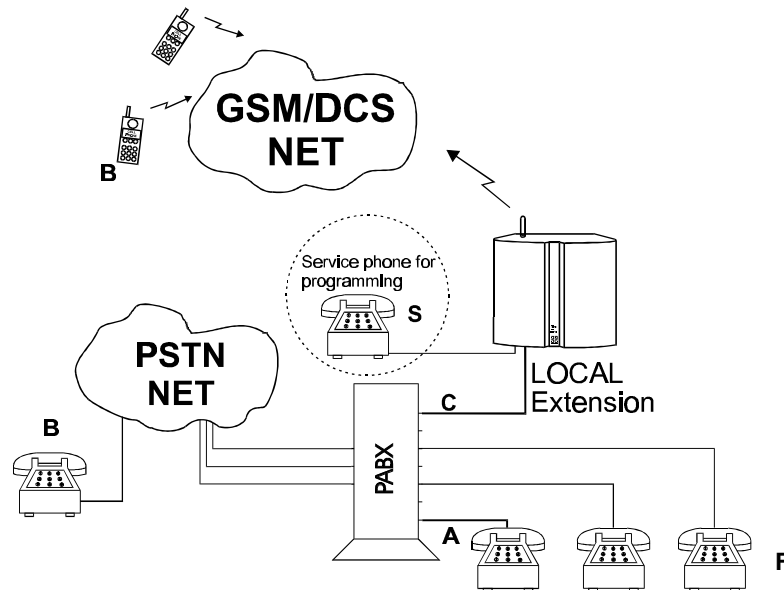


# Quick installation guide for Cellink TC35 with LLI. (Connection to PABX local extension line analogue, or direct to an analogue PSTN line):

*This installation guide describes the minimum requirements for a Cellink installation. Extra functions or set-ups might be needed or wanted, to gain an optimised system, refer to the manual.*



- **For first time set-up, disable the PIN-code on your SIM-card:** This should be done using a standard mobile handset.
- **Open the Cellink Box / Insert the SIM-Card:** Dismount the screw on the box (placed in the lower right corner). Place the SIM-card (after removal of the PIN-code) as shown in the document "How to install the SIM-Card". If you require the PIN-code to be enabled in the final system, it is easy to enable PIN-code when all other set-ups are done. If so, then first enter the PIN-code into the Cellink (via HOTKEY), and then re-enable the pin-code on you SIM-Card, using a standard mobile.
- **Switch on and test:** Connect a standard ordinary analogue phone as service phone to the 2<sup>nd</sup> plug from left, shown as **S** on the drawing. Turn on the power for Cellink and wait until both Light Emitting Diodes (LED's / service, and power) are illumination green. When the Service LED is green, the Cellink is registered on the mobile net and ready for use. Lift the handset on the service phone **S** and check that you hear a dial tone. Make a phone call from the Service phone **S** to a PSTN/MS number for checkout.
- **Detection of busy tone: (Learn the busy tone from the connected PABX or PSTN).** Connect a PABX local extension line **C** to Cellink, 3rd plug from left. Make a call from Phone **A** to the local extension number **C**, when you hear a dial tone from the Cellink, pres **##8099\*** on the Phone **A**'s keyboard (**NB! Keys shall be sent as DTMF tones**). Immediate Hang-up Phone **A** when a short acknowledges tone is heard, and then PABX will generate busy tones to the Cellink **C**. After some seconds (5-30 sec.), the Cellink automatic restarts and the busy tone has been learned and stored into the Cellink. (To check the busy tone from the PABX, make a call from **A** to **F**, when **A** hangs-up **F** should receive busy tones.
- **Check busy tone detection:** Make a call from **A** to local extension **C**, when dial tone is present, dial the number to the mobile **B** (dial with DTMF tones). When the conversation from **A** to **B** via **C** is established, hang-up the phone **A** and check that the conversation to **B** is disconnected with-in 2-6 sec.
- **Echo Canceling: (Learning the impedance for the used PBX).** Make a call from phone **A** to Local Extension **C**, when you hear a dial tone press **##\*\*113388\*** on phone **A** and the Echo Canceling will start. It's important that you mute the microphone phone **A**, if possible, so you don't disturb the calibrating. This test will take about 4-8 min. A less accurate and short time calibration can be done via the hotkey **##\*\*113399\***, however it is in general recommended to use the long calibration method. The Cellink automatic restarts when calibration is done.
- **Check the Echo Canceling:** Make a call from phone **B** to the Cellink, when you hear a dial tone call dial extension for phone **A**, check that when you speak into phone **B** you don't hear an echo.

Now you are finish with the minimum requirements for the Cellink. To program other features like Quick Dial, Fixed Dial, Inbound/Outbound numbers etc., use the Service Phone **S**.

**The following gives other guidance for quick and optimal Cellink installation.**

- **Program Quickdial with local mobile routing characteristics / or closed user group (VPN):**  
Quickdial eliminates the waiting period, on 4-5 sec., from the point when dialling to the Cellink ends and until the dialled number is routed into the GSM net. **The following is an example only for a network numbering plan as:** *Dial to mobiles from PSTN has the following format: 077123456, where 07 denoted routing for mobile telephony. Quick dial can for the above **example**, be programmed as: **##75 01 09 3 07**, where: **##75 01** = Quickdial position 1, **09** = total count of digit, **3** = Quickdial Match type for 2 digits, **07** = The two match digits for dial to mobile. ← **Example only**. Refer to the manual. The quick dial can be tested via the Service phone **S**. If the Cellink is member of closed user group (VPN), where for instance only 3-4 digits should be dialled within the group, you should program the Hotkeys for VPN enable, VPN outgoing line digit (normal 0), and count of digits dialled within the group.*
- **Fixed routing to a local extension, when you call the Cellink from outside:**  
When you call the mobile number for the Cellink from outside, the Cellink can either direct forward the call to a fixed programmable local extension, or the caller can freely dial the extension he wants.

**## 90 xxxx \*** Activate fixed local extension no. xxxx (max 4 digits)  
**## 90 9999 \*** Deactivate the function (free dial through).

At the same way, the Cellink can call to a fixed number for instance **B**, when the Cellink receives a call on local extension line **C**

**## 91 xxxxxxxxxxxx \*** Activate fixed external receiver number xxxxxxxxxxxx (max. 12 cifre).  
**## 91 9999 \*** Deactivate this function.

Both settings should be programmed via the Service phone **S**. If one of the above forwarding methods are used, a general LLI Direct call enable should be activated with the hotkey: **## 31 32 \***

- When all the programming is done, you should restart the Cellink by pressing **# \*** on the Service phone. Then the programmed parameters will be in force.

**Note.: The Cellink is to be used with an analogue local extension line, not ISDN.**

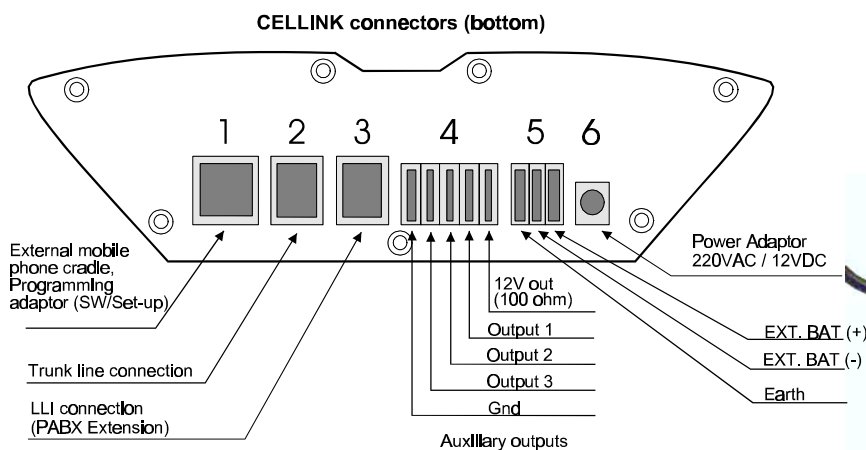
**The Service Phone should be a standard analog ordinary phone.**

**If you want to set the Cellink back to factory settings (LLI), use the Service Phone S and press ##7989\*. This will set the Cellink to default for LLI, and erase all your programming - so use this command with caution.**

**HOTKEY programming codes as are relevant for Cellink with LLI option:**

##	31	31	*	01.30	Enable LLI option (disable activated LLI or Trunk function)
##	31	30	*	01.30	Disable LLI, back to Trunk function)
##	31	32	*	1003	LLI: direct call enable. (enable forwarding)
##	31	33	*	1003	LLI: direct call disable (disable forwarding)
##	90	xxxx	*	1003	LLI inbound call no. (no. = xxxx, 1-4 digits)
##	90	9999	*		LLI inbound call no. Disable.
##	91	xxxxxxxxxxxx	*	01.08	LLI outbound call no. (Max. 12 digits) (number to forward to)
##	91	9999	*		LLI outbound call no. Disable
##	79	YYY X	*	01.06	PTN, Protected dial no. X= Position YY: Match digits d1 & d2 Clear
##	75	XX YY Z C(C) XX	*	01.06	QUICKDIAL: XX=Position YY=count of digits Z=type C(C)=Match digit(s) Clear position XX
##	76	XX	*	01.06	QUICKDIAL position in use, check with tone response
##	70	00	*	01.06	VPN disable
##	70	01	*	01.06	VPN enable (Closed user group)
##	70	1X	*	01.06	VPN outgoing line digit (X: 0-9)
##	70	2X	*	01.06	VPN numbers of digits, used within the group (x: 2-5)
##	79	99	*	01.06	Dial system clear (VPN, PSTN, PTN and QD) Clear all
##	94	X(X)(X)	*	01.20/22	Digit(s) in front of dial function, disable = 999
##	96	0X 99	* *	01.29	Remove 1 <sup>st</sup> digit X, if first digit = X Clear setting - no remove

##	34	12	*	01.51	Enable announcement of Call Line Identification.
##	34	13	*	01.51	Disable announcement of CLI Call Line Identification (hidden dial / no phone number announcement) (Network method 1)
##	34	14	*	01.55	Disable announcement of CLI Call Line Identification. (Network method 2)
##	92	xxxx	*	01.16	Access code via LLI/ISDN (x=0-9, 4 digits), disable=9999
##	34	08	*	01.29	Disable outgoing calls (only incoming allowed)
##	34	09	*	01.29	Disable incoming calls (only outgoing allowed)
##	79	89	*	01.30	CLEAR ALL settings for default LLI option
##	79	88	*	01.16	CLEAR ALL settings for default TRUNK line connection ( Analog)
#	4799#	xxxx	*	1000	Pincode enable with SIM Card pincode xxxx
#	4799#	9999	*	1000	Pincode disable.
##	31	01	*	1000	DTMF: enable in conversation. (for MS=>LLI, Flash function)
##	34	40	*	01.34	Disable Transmit +6dB gain (for TC35) back to 0 dB
##	34	41	*	01.34	Enable Transmit +6dB gain (for TC35)
##	34	42	*	01.34	Disable Receive +6dB gain (for TC35) back to 0 dB
##	34	43	*	01.34	Enable Receive +6dB gain (for TC35)
##	34	04	*	01.29	No FLASH w/ Service indicator
##	34	05	*	01.29	FLASH w/ Service indicator when OFF HOOK
##	34	06	*	01.29	FLASH w/ Service indicator when Conversation
##	00	xxxx	*	01.47	Enter Hotkey Access code (if protection enabled) (x=0-9)
##	99	xxxx	*	01.47	Enable Hotkey Protection Access code (x=0-9) ( Please also refer to Hotkey code ## 00 xxxx * )
##	99	9999	*	01.47	Remove/disable Hotkey Protection
##	20	99	*	01.45 01.51	Antenna Signal Level on Service Indicator (TC35) -100 dBm or less 1 flash Very poor -100 → -92 dBm 2 flash Poor - 92 → -84 dBm 3 flash Acceptable - 84 → -76 dBm 4 flash Good - 76 → -70 dBm 5 flash Good+ - 70 → -64 dBm 6 flash Good++ - 64 → -58 dBm 7 flash Good++ -58 dBm or greater 8 flash Best signal, but maybe to high
#*					Reset the Cellink, the programmed features will be in force.



Cellink are designed for newer low-volts types of SIM-cards, (3 volt or less).  
If you use a 5 Volt SIM-Card type, the Cellink TC35 module will not accept the SIM-Card, and the Cellink will never register on the GSM-net (no service)

