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User Guide

System Telephone ST 21 S0 System Telephone ST 21 UP0



User Instructions

The digital System Phone ST 21 SO is intended for the connection to an internal SO-Bus of an AGFEO ISDN Telephone System.

The ST 21 SO may be connected to the following AGFEO ISDN Telephone Systems:

- AS 181, AS 1x, AS 2x from Software 6.3
- AS 151 plus, AS 181 plus, AS 181 plus from Firmware 8.0
- AS 281 All-In-One, AS 35, AS 35 All-In-One from Software 7.1
- AS 40 P (P400-1), AS 4000 (P400-1), AS 100 IT (P400 IT), AS 43, AS 45, AS 200 IT from Software 7.1
- all other AGFEO Telephone Systems with a Firmware below 7.1 will emulate the ST 21 as an ST 25 System Phone. Please refer to Page 18 for a description of the functional changes.

The digital System Phone ST 21 UPO is intended for the connection to an UPO connection of an AGFEO ISDN Telephone System.

The ST 21 UPO may be connected to the following AGFEO ISDN Telephone Systems:

- AS 43, AS 45, AS 200 IT from Software 7.5

Note:

To reduce the power consumption of the internal S0-Bus, you may connect a separate Power Supply Unit to your ST 21 System Phone. The PSU's may be obtained from your Dealer or Distributor AGFE0 Order No. 1542431 (identical to Power Supply Unit of the STE 30 / ST40/STE40)!

Information regarding Software Upgrades may be obtained via your Dealer.

AGFE0 GmbH & Co. KG will not accept any liability whatsoever for any damages which may be caused by improper use of the ST 21 System Phone.

Safety Notice:

- Do not work on the extension wiring or connect/disconnect the ST 21 during a thunder storm.
 Install extension wiring of the ST 21 in a manner that it is not walked on or causing anybody to trip over them.
- Ensure that no liquids are allowed to enter the housing of the ST 21 Digital System Phone as otherwise short circuiting may result.

About this User Guide

This User Manual is valid for the current system firmware available at the time. However, the ST 21 System Phone is controlled from the Telephone System, which means that if the system firmware is changed, then some sections in this manual may become invalid.

This manual contains user instructions for the ST 21 and a brief instruction regarding the system features. A detailed description of features relating to the Telephone System can be found in the accompanying user guide delivered with the Telephone System.

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View of Base



Untangler Connection

The ST 21 handset offers a compartment for the connection of a cord untangler. As the optional untangler is fitted inside the handset it will not interfere in normal use or when the receiver is put back on hook.

- to open the handset cover, press the lid (arrow 1) and remove lid (arrow 2).
- unplug the handset cord from the handset.
- connect the untangler to the handset.
- connect the handset cable to the untangler.
- close the lid



Display Angle

Your Display can be adjusted to 6 different viewing angles.

Connection

Connect the line cord of the ST 21 into the ISDN telephone socket which is connected to the internal ISDN line of your AGFEO Telephone System.

- insert the RJ 45 plug into the socket until your hear a positive click.
- to release the plug, press the release latch on the plug and at the same time pull the cable out of the socket. (use a small screw driver if required)

To operate the ST 21 UP0, please insert the RJ 45 plug into the ISDN telephone socket which is connected to the UP0 port of your AGFE0 Telephone System. Please note only one telephone can be connected to each UP0 port.

- insert the RJ 45 plug into the socket until your hear a positive click.
- to release the plug, press the release latch on the plug and at the same time pull the cable out of the socket. (use a small screw driver if required)

Please note that the S0 Bus must be terminated with two 100 Ohm ¼ Watt Resistors, the UP0 port does not require any termination.

Registration

An extension number will be allocated automatically from the telephone system to the ST21 once it is connected to the system, ie plugged into the ISDN telephone socket. If the phone is connected for the first time to the system then it will have to be registered to it. Please follow the instruction in the display of the phone. It may be useful to allocate an extension number to the ST 21 before this is connected to the system by using TK-Suite Set the computer based programming tool.

Buttons



1 0 Numeric Keypad

* # * and # Buttons

- Set Button Start and end programming. Keep this button pressed to toggel between programming tree and programming index
- Handsfree Button Activates the Loudspeaker. Button lights up when in use.
- Arrow Buttons To scroll through the display if there is more than one function available.
 - Phone Book Button Retrieval of Telephone Numbers.
 - LNR Last Number Redial Button. Keep this button pressed to show call log.

- Message Waiting LED Flashes on new entry in the call log or missed call. Permanent lit for numbers already viewed. Clears when number is called or deleted from list by pressing clear button
- Clear Button Clear an entry
- OK OK Button Confirms Entry
- Stop Button disconnect or cancel an action
- 10 function Buttons User programmable
- Plus and minus for volume adjustment of handset or speaker.

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System Telephone ST 21

Status Display

Status display of internal and external S0 Bus and and analogue lines

Ringing extensions and extensions which are off hook will be displayed reversed

Feature Indication in Display:

- One CO Line (B-Channel or Analogue \times Line) is in use. Capital X both B-Channels are in use
- Internal ISDN line (one B-Channel) is in ÷ use. Capital I both B-Channels are in use.

Features. Browse with << >, Select with "ok"

- Call Waiting off Ņ
- Do not Disturb (DND) on ж
- Call Forwarding is set 2

Using the Menu/ Status Display

Please pay attention to the display when using the phone; it will guide you through all available user options. Should the Context Menu be enabled (default setting) then you may select from other functions which will be offered to you in the last line of the display, either before answering a call or during a call.

Selectable features are:

Answer, Park Call, Retrieve, Call Pick Up, Call-Split, Transfer, Call Back, Conference, Enquiry, Reject, Disconnect, Deflect to, Back, Completed and Door-Opener.

The frequently used functions will be offered first. You may browse for additional features, if available by using the arrow buttons 🗨 🗩 . To select the displayed function press 📧.

- C Night Service is enabled
- Telephone Lock is enabled
- Wake Up Call is set
- Appointment on
- Sensorenabled
- Т Withhold own Number is enabled
- PC System is being programmed by PC

- Ŷ
- £.
- œ
- S
- F Call Filter enabled

WK19 TH 11.Mau

X-i----

Display of enabled ₽€₽\40 10:28 features

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Programmable Function Buttons (Overview)

TAM activation	To switch answering machine on or off (optional module)
TAM info	To listen to recorded messages.
TAM Memo	To record memo on the TAM
Reject	Reject an incoming call. Caller will hear busy tone.
Call Waiting on / off	You can select if: Set to off busy tone will be returned if the extension is on another call or off hook. A waiting call should only be visually indicated on your phone. (set to visual) Or if a call waiting tone should also be signalled. (set to audible)
Call Deflection	Will divert an incoming call during the ringing phase. There will be no change to the ringing tone when diverted. The caller will not be aware that the call was forwarded.
Call Filter	To switch Call Filters on or off.
Call Log	Will list unanswered in the Call Log
Cleaning	In connection with the check in / check out button. This can be used to indicate to the front desk that a room has been cleaned and is ready for occupation.
Do not Disturb (DND)	This will disable the Tone Ringer Special function buttons may be set: DND for internal calls DND for external calls DND for internal- and external calls.
Night Service (AVA 2)	Night Service on or off. Special function buttons may be set: Night Service can be switched for each trunk line. Night Service can be switched for all trunk lines.
Call Forwarding	Enable / Disable Call Forward if designated extension does not answer an incoming call. Special function buttons may be allocated: Switch Call Forward for each trunk line. Switch Call Forward for all trunk lines.
Tannoy	Announcement via Public Address Amplifier connected to the Telephone System
Busy on Busy	Returns Busy Tone to Caller if one Extension is Busy within Call Distribution Group. Special Buttons can be assigned -Busy on Busy for each Call Distribution Group switchable seperately -Busy on Busy for call Call Distribution Group switchable together
Call by Call	To select Network Provider via LCR
Check In/ Check Out	Check in / Check out for Hotel applications. Will start or stop call logging and switch on or off trunk line access.
Page (Tannoy)	Pageing Announcement to System Phones. Programmable function Button - Page specific Extensions.
Units	Display Call Cost
Call Capture	Malicious Call Identification via ISDN-Exchange
Remote functions	Sending of stored DTMF Tones (10 * #) for a remote interogation of a Telephone Answering Machine (TAM)
Remote Answer	To pick up another ringing extension.
Group Button	Log in or out of Groups and features
Headset	To use a Headset (only Digital System Phones)
Mute Button 8	To mute microphone on your telephone.

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Programmable Function Buttons (Overview)

Call Pick Up	To Pick Up a call ringing on another extension. A Special Function Button may be assigned for this feature.
Withhold	To withhold own number being forwarded to the number called.
Internal Button	To Dial Extensions. Function Button can be assigned to call specific Extension (DSS)
ISDN-Hold	To Hold an external call in the Telephone Exchange (only available on PTMP ISDN lines)
ISDN-Call Forwarding	To set or cancel the ISDN Call Fowarding feature.
Conference	To set up a Conference Call with Internal and or External calls.
Speaker Volume	To adjust Speaker Volume for Handsfree or On Hook use.
LCR	To set or cancel Least Cost Routing (LCR) on your System Phone.
Call Split	To talk to more than one Call in turn without connecting them.
Brokers Call	To talk to one internal and one external call at a time without connecting them.
External	To select a specific number to make an outgoing call on. A function button may be assigned for this feature.
Relays	To activate a Relays. A special function Button may be assigned.
Reserve	To reserve a line should all lines be engaged at the time. (Call Back when free)
Sensor	To Enable or Disable Sensors.
SMS info	Will list all saved SMS messages
Write SMS Message	To write a SMS message.
Enquiry Call	To establish or set up an Enquiry Call
Telephone Book	To select a number out of the System Telephone Book
Telephone Lock	kTo Lock the Phone. Emergency and direct numbers may be dialled if set.
Appointment	To set or cancel a preset Appointment Time
Timer	To switch on or off a Timed based function, such as Day-Night Service, Call Forwarding, Relays etc. Buttons can be assigned for this function. 20 Multi Function Timers are available.
Doorphone and Lock Release	Function Button can be assigned to connect to the Doorphone. A separate Button can also be assigned to activate the Lock Release.
Transfer	To transfer and connect an external call to an external call.
Diversion from (Follow me)	To divert all calls from another phone to the current phone used.
Diversion to	To divert all calls to another extension- or external number.
Wake Up	To set or cancel a Wake Up Call
Destination Button	To Call a preset Telephone Number
- Public - Private	 A number is stored in the Telephone System Memory A number is only stored in your telephone

LED - Indication Associated to Function Buttons

Answering Machine
Messages
Call Waiting activation
Call Log

Do Not Disturb Night Service Call Forwarding Busy on Busy Group Button Headset Withhold Number LCR Relays SMS Info

Mute Button Telephone Lock Appointment

Ringer Off Doorphone and Lock Release Diversion from Diversion to Wake Up

LED on

Stored messages already listened to. enabled Call Log entries already viewed on on set on Logged in active on on on Messages already read enabled on set on connected to door phone enabled enabled set

disabled No numbers in Call Log off off off off Logged out off off off off No Messages disabled off off

LED off

No Messages

off switched off

disabled disabled off LED flashes

New Messages

New Numbers in Call Log

Incomming call

Relay is being rung New Messages

when appointment call is ringing

called from door phone

Unanswered Wake Up Call

LED - Indication Associated to Function Buttons

	LED on	LED off	LED flahes (slow)	LED flashes (fast)
TAMActivation	TAM switched on	TAM switched off		
Extension Button (DSS)	Extension Busy or off hook		The button is allocated to an answering machine ¹¹ . If it has answered the call, then it can be picked up by presseing this button.	Exclusiv Hold.
Line Button	Line is in use	Line is available to make an outgoing call	Inoming Call	Exclusiv Hold. Call can only be retrieved by the original extension.
Timer Button	Timer is on, function is off	Timer and function is off	Timer and function is on	
Memory Dial Button		Goes off as soon as the call is answered	Flashes on incoming call from that number. Call can be picked up.	

General information regarding a Line Button.

To have a meaningful presentation of line buttons it is suggested to programm two buttons for each ISDN line (2 B-Channels). By pressing a flashing line button when the phone is iddle will give information of the waiting callers number. Pressing this button when the phone is off hook will connect to the call.

1) Only Answering Machines which are directly connected to an Analogue Extension Line.

Button Assignment

In default all System Phone Button same functions.	s are pre-programmed with the	Announce	Call Waiting
		Appointment	Tone Call
Functions of each button can be ch individual application.	anged to accommodate an	Call Filter	Mute
		System Memory	Diversion to
		System Memory	Internal
Changing Button Assignment	_		
⇒31 ₩)K →	
Start Enter PIN if Press Buttor Programming required program	to Enter first letter of function or Con browse using the arrow Entr buttons.	nfirm End ry Progra	mming
"Direct Line" Enabled	_		
Calling an Extension:	Щ. Ш.		
Lift receiver	Dial # and Extension Number		
Making an Outside Call:	##		
Lift receiver	Dial Number		
"Direct Line" Disabled			
Calling an Extension:	矖 Dial Extension		
Making an Outside Call	Number		
Making an Outside Call:	0 闘 Dial 0 (or 9) for a Line. Wait for Dial Tone. Di	al Number	
	Slate (or 7) for a Line, wait for Didt folle. Di	acrialiber.	

Call Waiting

First Alternative:



Second Alternative:

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\square
```

Press the Button "Call Split or Brokers Call". The first call is put on hold and you are connected to the second caller. You now can toggle between the calls or transfer the call.

Reject a Waiting Call			
)	
ringing extension in the call dist	caller will receive busy tone if you ribution table. The caller will cont n is in the same call distribution tal	inue to hear a	
Initiate Call Back whe	en free		
)	<u>OK</u>	÷	
Called extension is busy or does not answer your call	Press 📧 . Call Back when free initiated. Confirmation tone will l returned.		
Outside Call Pick Up			
((A)) -	<u>ok</u>		
To pick up incoming call. Pick up Handset. Press 📧 to answer the call.			
Call Pick up from Ans	wering Machine		

Call Pick Up from an Answering Machine is only possible if the the port has been configured to "Answering Machine" via TK Suite.

)



Incoming call has been answered by the Answering Machine.

Lift Handset, **Press Button "Pick Up Call".**

 $\mathsf{NOTE}:$ Only possible if this button has been configured as a DSS button for that extension.

Display Call Log

The handset is on hook. The Message Waiting LED is flashing.

There will be at least one new entry in the Call Log. The Message Waiting LED will flash until the new entries have been displayed, after which the LED will remain lit until you return the call to the displayed number or delete the entry.

Press the message waiting button to display the first entry in the log \square .

The LCD will display the number, time & date, or a notification to return a call from an extension including time & date.

Further entries may be displayed by using the arrow keys.

The number displayed will automatically be dialled by lifting the handset. The number logged will automatically be deleted once the call is answered. The number will remain in the call log if the call remains unanswered.

To delete an entry, select the required number and press [Cear].

To exit the call log display press [Stop] .

Do Not Disturb (D and Setting	ND) Programming		
\Rightarrow	"1": DND from Extension Calls Only "2": DND from Incoming Calls "3": DND for both		
Select the function with the Button "Set" and Button "DND"		Exit programming	

To set or cancel DND for the pre-selected condition press the DND button.

Select Retrieval of Phon	Book Entries
Press and hold the Phone Book Button for 1 second	Select the desired setting with the arrow keys. (Vanity, Numeric or Alphabetical) confirm selection pressing 📧 .
Telephone Book (Numeri	c)
	÷ or d
Proce Phone Enter the required s	ort code or use the arrow Disk up handcat as prace "Speaker Dhana Button" the

 Press Phone
 Enter the required short code or use the arrow
 Pick up hand

 Book Button
 keys to browse to find desired entry.
 telephone nu

Pick up handset or press "Speaker Phone Button", the telephone number will be dialled automatically and the selected number will be displayed.

Phone Book (Vanity)

|--|--|

Press Phone Enter the first letter, ie. A=2. The Book Button first entry with this letter will be displayed

Select the next letter, ie M = 6. The first entry with "Am" will be displayed

📩 or 🔟

Pick up handset or press "Speaker Phone Button". The selected entry will be dialled.

Browse with arrow keys \blacksquare

Phone Bo	ook (Alphabetical)		
			r 🖾
	Enter the first letter, ie. A=2. The first entry with this letter will be displayed	Select the next letter, ie N = 66. The first entry with "An" will be displayed	Pick up handset or press "Speaker Phone Button". The selected entry will be dialled.

Browse with arrow keys <

Recent Numbers Redia	al	
÷		î.
With the handset on hook press the "RedialButton". The last dialled number will be displayed.	Use arrow buttons to select one of the last 10 numbers dialled.	Pick up handet, displayed will be dialled.
Automatic Redial Fund	tion	
÷	OK	D 10 🚔
With the handset on hook press the "RedialButton". The last dialled number will be displayed.	Press (IN) to start the autoredial feature. The display how many attempts the systry to to connect to the nun loudspeaker will be switch soon as a connection has bestablished.	will showspeaker phone button as soonstem willas the caller has answered.nber. TheOtherwise the call will beed on asdisconnected after 20

Location

Select a suitable location for the ST 21 to be installed. Please observe the following points:

- Do not use locations where the phone could be subjected to water or chemicals.
- Rubber feet of the Phone: Your phone has been manufactured for general use. Some chemicals found in furniture polish or other furniture care products may alter the substance of the rubber feet of the phone. Due to this influence it may be possible that the rubber feet of the telephone may leave some marks. We will not accept any liability for any of such occurrences. With reference to new furniture or polished furniture we would suggest to use a non-slip protective matt for your telephone.

Cleaning

To clean your telephone **use a soft damp cloth**. An antistatic cloth may also be used. **NEVER use a dry cloth** as this could result in a static discharge which may damage electronic components within the telephone. Please take great care that **NO MOISTURE** will enter the telephone as this will lead to malfunction and ultimately damage the telephone.

Insert Label

The enclosed label for the ST 21 is printed with the default setting of the function buttons (see Page 7). The reverse of the label can be handwritten if alternative functions have been allocated.

The label can be removed by inserting the finger nail on the top of the plastic insert and housing. Move the insert downwards until it is curved. The label can now be removed.



To re-insert the label put the bottom of the clear plastic strip in the bottom slot of the telephone and follow the instruction above in reverse order.

To give a professional appearance, labels can be printed with the programming tool TK-Suite directly from your PC.

Headset Connection

A headset connection can be found underneath the ST 21. (Suitable for RJ 45 or RJ 10 connectors) The following corded headsets may be used.

Manufacture	r Description	Manufacturers Order No.
AGFEO	Headset 2100 Headset 2200	6548839 6548847
Plantronics	Supra Monaural Polaris Modell P51 * Tristar Modell P81 * * including Connection Cable U10P	32190-04 33695-01 38058-01
GN Netcom	Profile Monaural ** Optima NC Monaural ** ** including Connection Cable	1861-15-03 1913-29-01 8800-00-01

Note: The headset socket is indicated by a headset symbol. (Further information on Page 4)

- Insert the headset plug into the headset socket until your hear a positve click.
- Push the cord in the cable channel so that it will exit towards the back of the phone.
- To release the headset press the latch on the plug and at the same time pulling the cord out of the socket. If required use a small screwdriver.

Firmware Upgrade

The firmware of your ST 21 telephone can be upgraded without the need of any hardware changes. Please follow the instructions if a firmware upgrade is required:

$\stackrel{\iota}{\frown}$	* 0 #	1		OK
	Press the following buttons simultaneously €,@,⊞. . The ST 21 is now in service mode.	Press 🗊 for SoftwareUpdate	Enter the telephone number of the Update Server which is: +49 (0)521 44709 950. Depending on the line seizure set, you may have to prefix the number with 0 (9).	Confirm the entry with OC. The Up- date Server is now being dialled and the update will begin.

The update will be completed in approx. 90 secs, after which the ST 21 will re-register to the telephone system. The current software will be displayed on the phone on start up. The firmware update is now completed.

Change of Opertion in Emulation Mode

The ST21 will be emulated as an ST25 for AGFE0 telephone systems with an S0-Bus and firmware lower than 7.1, with the exception of the telephone systems AS 181, AS 2x and AS 2x from firmware 6.3. Due to this the following buttons will change or have no function.

- The "+" and "-" Buttons of your ST21 are without function.
- The LED's of the Function Buttons have no indication.
- Up to 9 functions will be available. The first button on the bottom right will be used as a shift key.
- In contrast to the ST25, the ST21 has only one function button level.
- The arrow button are used for "next" (arrow to right) and "shift next" (arrow to left).
- The display will feature 16 characters per line.
- "Stop"will change to the "esc" button.
- The "ok" button will serve as "enter" key.

Further information regarding the use of the ST 25 System Phone can be found in the "User Guide" of your Telephone System.

Declaration of Conformity

EU-Konformitätserklärung

EC-Declaration of Conformity CE-Déclaration de Conformité

Der Hersteller:

AGFEO GmbH & Co. KG

The Manufacturer: Le Constructeur:

Adresse:

Address: Adresse: Gaswerkstr. 8 D - 33647 Bielefeld

Erklärt, dass das Produkt: ST 21

Declares that the Product: Déclare que le Produit:

Туре:	Systemtelefon
Model:	ST 21
Components:	

die grundlegenden Anforderungen gemäß Artikel 3 der nachstehenden EU-Richtlinien erfüllt:

meets the essential requirements according to article 3 of the following EC-Directive: est conforme aux exigences essentielles d'article 3 de la Directive CE:

Richtlinie 1999/5/EG des Europäischen Parlaments und des Rates vom 09. März 1999 über Funkanlagen und Telekommunikationsendeinrichtungen und die gegenseitige Anerkennung ihrer Konformität

Directive 1999/5/EC of the European Parliament and of the Council of 09 March 1999 relating to radio and telecommunications terminal equipment, including the mutual recognition of their conformity Directive 1999/5/EC du Parlement européen et du Conseil du 09 mars 1999 concernant les radio et équipement terminaux de télécommunications, incluant la reconnaissance mutuelle de leur conformité

und dass die folgenden harmonisierten Normen angewandt wurden:

and that the following harmonised standards has been applied: et que les standards harmonisés suivants ont été appliqués:

> EN 55022/2003 EN 55024/2003

Bielefeld, 22. Mai 2006

Ort und Datum der Konformitätserklärung Place and date of the declaration Lieu et date de la décleration

Phone : +49(0)5 21 44 70 9-0 FAX : +49(0)5 21 44 70 9-50 Name und Unterschrift Name and Signature Nom et Signature



The crossed out wheeled bin on the product means that this belongs to the group of Electro- and electronic apparatus.

In this context you are directed by the European regulation to dispose of used apparatus - at the point of buying an item of equal proportion / value

- at the local available collection point for disposal

With this you will participate in the reuse of material and valorisation of disused electricand electronic apparatus, which otherwise could be a health hazard and be negative to the environment.



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