



Customer Interface Publication: CIP001a

KCOM GROUP PLC

Public Switched Telephone Network (PSTN)

Technical Characteristics of the Supplementary Services available on the Single Analogue Line Interface

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Note: this document replaces a previous publication KCL CIP001a on the same subject.

1 Introduction

This document specifies the technical characteristics of the supplementary services available on the single analogue line interface operated by KCOM Group PLC delivered to a customer at the Network Terminating Point (NTP).

Changes to the network that affect the correct working of approved terminal equipment will be published by KCOM Group PLC in various documents made available from the address below. If the changes impact on this document then it will be updated.

Enquiries relating to the technical content of this document and the availability of other publications should be directed to:

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2 Scope

KCOM Group PLC provides a variety of supplementary services to the customer over the single analogue line interface. These services are classified as either network activated or customer activated.

Some of the supplementary services are not provided by default and require prior arrangement. In addition, some of these services, such as Caller Display, require specialised terminal equipment in order to utilise the service.

The technical characteristics of the single analogue line interface are described in KCOM Group PLC Customer Interface Publication 001, KCOM (Hull) CIP001.

3 Supplementary Services

3.1 Network Activated Services

- Caller Display
- Withholding Calling Line Identity
- Call Barring
- Calling Number Withheld Block
- "Your Call"

3.2 Customer Activated Services

- Call Waiting
- Conference Call
- Reminder Call
- Call Return (1471)
- Call Diversion
- Withholding Calling Line Identity

Withdrawn

- Ring Back (no longer available as of 31/05/18)

4 Service Description

4.1 Network Activated Services

4.1.1. Caller Display

The Caller Display Service delivers the identity of the calling line to the called customer. This service is presented in accordance with BT SIN 227 [1] with the exception that Calling Line Identity Presentation during call waiting is not provided.

4.1.2. Withholding Calling Line Identity

Individual lines can be configured so that Calling Line Identity is withheld by default. Calling Line Identity can then be sent on a per-call basis by using the dial-prefix 1470 as described in BT SIN 227 [1]. See also 4.2.7.

4.1.3. Call Barring

There are three types of barring available.

- a. Admin Controlled – Permanent Outgoing Call Barring
- b. Pre-arranged Call Barring – Customer Controlled
- c. Selective Call Barring – Customer Controlled

a. Permanent Outgoing Call Barring

This option is available to customers wishing to have outgoing calls permanently barred. Categories are selected on application.

b. Pre-arranged Call Barring – Customer Controlled

The customer decides which categories of calls they wish to have restricted on application. They can switch the barring on and off using a PIN number.

c. Selective Call Barring – Customer Controlled

The customer can choose which category of call they wish to be barred. They can change the category barred by using a set of commands on their telephone, and a PIN number for security reasons. The bar can be activated and deactivated using the PIN number.

4.1.4. Calling Number Withheld Block

This facility allows customers to reject calls that originate from callers who have withheld their telephone number (CLI).

If a caller has withheld their CLI and the person they are calling has Calling Number Withheld Block (CNWB) activated, the called party's telephone will not ring. The calling party will receive a message saying:- 'The person you are calling is not accepting anonymous calls. Please re-dial without withholding your number'.

Unless the calling party re-dials, releasing their telephone number, (by not dialling 141 or by over-riding their permanent CLI Line Block) they will not be connected.

It is important to note that use of this facility **may prevent particular calls being connected**. For example, many organisations including hospitals, police, doctors etc. have their CLI blocked permanently for a number of reasons, including security.

4.1.5. "Your Call"

Your Call allows single ordinary line customers to have an additional telephone number allocated to their one single line. When the additional number is called, a different ringing cadence is applied to the line.

The characteristics of the ringing signal are as described in KCOM Group PLC Customer Interface Publication KCOM (Hull) CIP001 with the exception of the cadence which is:

Cadence Active period:	1.0s
Cadence Inactive period:	2.0s

4.2 Customer Activated Services

4.2.1 Call Waiting

This service enables a customer engaged on a call to be audibly alerted through the telephone earpiece to another incoming call.

The service can be activated by dialling DTMF [4 3 #] and cancelled by dialling DTMF # 4 3 #]

The customer has three options: switch between the calls, terminate the first call, reject the second call.

a. Switch Between Two Calls

On hearing the audible alert tone the customer holds the existing call by activating a timed break recall. On hearing dial tone the customer can access the second call by

dialling DTMF 2.

The calls can be switched by activating a timed break recall and dialling DTMF 2 following the subsequent dial tone.

The second call can be terminated by activating a timed break recall and dialling DTMF 1 following the subsequent dial tone.

b. Terminate the First Call

On hearing the audible alert tone the customer can terminate the existing call as normal. The second call can be accessed by activating a timed break recall and dialling DTMF 1 following the subsequent dial tone.

c. Reject the second call

On hearing the audible alert activate a timed break recall dial DTMF 0 following the subsequent dial tone. The original conversation is restored and the second is presented with a recorded message advising them to ring back later.

Alternatively, the audible alert can be ignored and it will cease after 30 seconds.

4.2.2. Conference Call

A three-party conference call can be established on the single analogue line. International call parties can be included but only to a maximum of one party.

The conference call can be established as follows:

- Establish the first call
- Activate a timed break recall and wait for dial tone
- Establish the second call
- Activate a timed break recall
- Dial DTMF 3 to connect all parties

4.2.3. Reminder Call

An alarm or reminder call can be activated for a particular time of day on either a single or regular basis.

(a) Single reminder call

The single reminder call can be set-up by dialling the following sequence of DTMF digits after the receipt of proceed indication following the establishment of the on-line condition

[5 5 [XXXX #

where “XXXX” is the time of the call in 24 hour clock format e.g. “1315” {1.15 p.m.}
The time set can be checked by dialling [# 5 5 #]

The time set can be cancelled by dialling
5 5 [

(b) Regular reminder call

The regular reminder call can be set-up by dialling the following sequence of DTMF digits after the receipt of proceed indication following the establishment of the on-line condition

[5 6 [XXXX [Y #

where “XXXX” is the time of the call in 24 hour clock format e.g. “1315” {1.15 p.m.}, and “Y” is programme code :

Every Monday	1	Every Saturday	6
Every Tuesday	2	Every Sunday	7
Every Wednesday	3	Every Monday to Friday	8
Every Thursday	4	Every day	9
Every Friday	5		

The time set can be checked by dialling [# 5 6 #]

A single programme can be cancelled by dialling # 5 6

All reminder programmes can be cancelled by dialling # 5 6 #

4.2.5. Call Return (1471)

The “Call Return” supplementary service enables a customer to establish the telephone number of the most recent calling party. The service is activated by dialling the DTMF or Loop Disconnect sequence

1 4 7 1

on receipt of dial tone. An automated verbal announcement of the telephone number of the calling party is then made.

The telephone number returned can be dialled by dialling a DTMF 3 immediately after or during the verbal announcement.

The Call Return service will not announce international calls or calls from some cable networks. The service will not work on telephones connected to certain types of switchboards.

4.2.6. Call Diversion

The “Call Diversion” supplementary service enables customer to re-direct calls to any number in the UK and abroad. Three types of call diversion are available:

a. Basic Call Diversion

Calls are diverted to the number specified. The calling party is normally informed by a short announcement that Call Diversion is in operation. The number is specified as follows:

Lift receiver and wait for dial tone, then enter the following DTMF dial sequence:

[2 1 [NN....NN #

where NN....NN is the number to which the call is to be diverted. The number entered can be checked by dialling

[# 2 1 #

The number entered can be cancelled by dialling

2 1

b. Diversion No Reply

Calls are diverted to a specified number if the call is not answered within 15 seconds. An announcement is normally made to the caller. The number is specified as follows:

Lift receiver and wait for dial tone, then enter the following DTMF dial sequence:

[6 1 [NN....NN #

where NN....NN is the number to which the call is to be diverted. The number entered can be checked by dialling

[# 6 1 #

The number entered can be cancelled by dialling

6 1

c. Diversion on Busy

Calls are diverted to a specified number if the called party's number is engaged. An announcement is normally made to the caller. The number is specified as follows:

Lift receiver and wait for dial tone, then enter the following DTMF dial sequence:

[6 7 [NN....NN #

where NN....NN is the number to which the call is to be diverted. The number entered can be checked by dialling

[# 6 7 #

The number entered can be cancelled by dialling

6 7

Note

A maximum of 16 digits is allowed for the specified number to which the call is diverted. It should be noted that this may prevent call diversion to some overseas codes.

4.2.7 Withholding Calling Line Identity

Where Calling Line Identity is Withheld by default (see 4.1.2 above), it can Withheld on a per-call basis by using the dial-prefix 141 as described in BT SIN 227 [1].

5 Terminal Equipment Specifications

The minimum recommended terminal equipment performance specifications relevant to the functioning of the supplementary services are:

- CLI: BT SIN 227 [1] Service Description: BT SIN 242 [2] Terminal Equipment Requirements
- DTMF: ETSI ETS 300 001 [3] January 1997 Clause 5.4 with UK specific parts where applicable
- Recall: BS6305 clause 4.4.4 [4]

6 Glossary

BS	British Standard
BSI	British Standards Institute
BT	British Telecommunications plc
CLI	Calling Line Identity

DTMF	Dual Tone Multi-Frequency signalling
EC	European Community
EMC	Electromagnetic Compatibility
ETS	European Telecommunication Standard
ETSI	European Telecommunications Standards Institute
PIN	Personal Identity Number SIN Suppliers Information Note TE Terminal Equipment

7 References

Ref	Standard	Title	Date
[1]	BT SIN 227	Calling Line Identification Service: Service Description	1997
[2]	BT SIN 242	Calling Line Identification Service: Terminal Equipment Requirements	1996
[3]	ETS 300 001 4 th Edition	Attachments to Public Switched Telephone Network (PSTN): General Technical Requirements for Equipment Connected to an analogue subscriber interface in the PSTN	1997
[4]	BS6305 1992	General requirements for apparatus for connection to public switched telephone networks run by certain public telecommunications operators.	1992

8 History

Date	Issue	Comments	Author
Precursor document: Technical Characteristics of the Supplementary Services available on Single Analogue Line Interface [Issue 2.0 May 2000] KCL CIP001a			
Dec 2003	Issue 1.0	Kingston Communications (HULL) PLC publication to replace the above	M. D. Crowther
Aug 2007	Issue 1.1	KCOM Group PLC publication to replace the above and change of contact information.	M. D. Crowther
Apr 2016	Issue 1.2	KCOM publication to replace the above due to company name change from KC to KCOM and document formatting changes made	Amanda Woodard
July 2018	Issue 1.4	KCOM publication to replace previous version with updated content	I.P.