

Panasonic

**Digital Super Hybrid
System**

KX-TD208E

Product Description

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System Parameters

System Microprocessor	8 Bit CPU
System Memory	1.25 Megabit RAM
	8 Megabit ROM
Digital Bandwidth (2 B+D)	8 Kilobytes/Second
Voice Channel	16Kbps
Data Channel	64Kbps
Signalling	64Kbps
Cabling (digital)	1 pair (2 wires)
Analogue (SLTs)	1 pair (2 wires)
Modulation	Pulse code
Intercom Paths	Non blocking

System Hardware

Cabinets

Note: This table shows the maximum values possible in the system, the actual values will depend upon the configuration of the specific system and its components.

Maximum port configurations	
Exchange line ports	4
Extension ports	12
Max number of Digital keyphones	4
Max number of Analogue keyphones	4
Max number of SLTs	8
Max number of Extensions	12
Max number of ISDN2 Extensions (Using P-MP)	8
Max number of ISDN2 (Channels)	2 (4)

System Components

KX-TD208E Central Control Unit

The central control unit is initially configured 1 ISDN2 line (2 channels) and 8 extension ports. The following devices are built in:

3. RS232C call logging port
4. Ring generator
5. DTMF receivers
6. All system control
7. Doorphone circuit
8. Door release contact

KX-TD20870CE Proprietary Telephone Card

Interface card to allow connection of 4 proprietary telephones either digital (with XDP) or analogue 7000 series.

KX-TD20880CE 1 ISDN2 Line Card

Interface card to allow connection of 1 ISDN2 exchange line. This card can be used as to support ISDN2 extensions, up to 8 devices may be connected as extensions.

KX-T30865E Door-phones

The central control unit has an interface built in to support one door-phone. The door-phones are proprietary, weather resistant units. There is also a relay for controlling a remote door-lock.

Hand-set Options

1. Digital Proprietary Keyphones (KX-T7250E, KX-T7230E and KX-T7235E)
2. KX-T7000 Series Keyphones (KX-T7050E, KX-T7020E and KX-T7130E)
3. KX-T7310E, KX-T7315E and Single Line Devices

The Digital Super Hybrid System offers the choice of a wide range of key hand-set.

The features which are available to hand-set users will depend upon the type of hand-set being used.

Hand-set Features

Key features of the KX-TD208E hand-sets are:

One-Touch keys	The one-touch keys provide single key access to personal speed dials or system features allowing them to be called up with a single key press.
Flexible keys	Flexible keys are used as line use indicators. Unused Flexible keys can be programmed with other system functions or used as extension calling and busy lamp field keys.
Dual colour LEDs	The Flexible keys each have a dual colour LED which is used when the key is programmed as a line, extension, message waiting or call forward call key to show the status.
Message lamp messages.	Each key telephone can have an LED lamp which is used to give visual indication of messages.
Distinctive HOLD key operate.	The HOLD key's orange colour and prominent position make it easy to locate and operate.
Volume control	To adjust ringing, speaker and hand-set volumes independently..
LCD display	Certain key telephone models have an alphanumeric display allowing the display of information and messages which enhance its functionality.

Hand-set Types

The table below lists the KX-TD208E hand-set types and their key specifications.

Model	Description	Flexible Keys	One Touch Keys	Dual colour LEDs	Message LED	Alphanumeric Display	Handsfree	Parallel Connection	XDP
KX-T7250E	0 key hand-set	6	0	✓				✓	✓
KX-T7050E	12 key standard	12	4	✓	✓			✓	
KX-T7020E	12 key handsfree	12	4	✓	✓		✓	✓	
KX-T7130E	12 key display	12	12	✓	✓	✓	✓	✓	
KX-T7235E	12 key large display	12	10	✓	✓	✓	✓	✓	✓
KX-T7230E	24 key executive	24	0	✓	✓	✓	✓	✓	✓
KX-T7220E	24 key handsfree	24	0	✓	✓		✓	✓	✓
KX-T7315E	SLT	0	8				✓	✓	✓
KX-T7310E	SLT	0	8					✓	✓

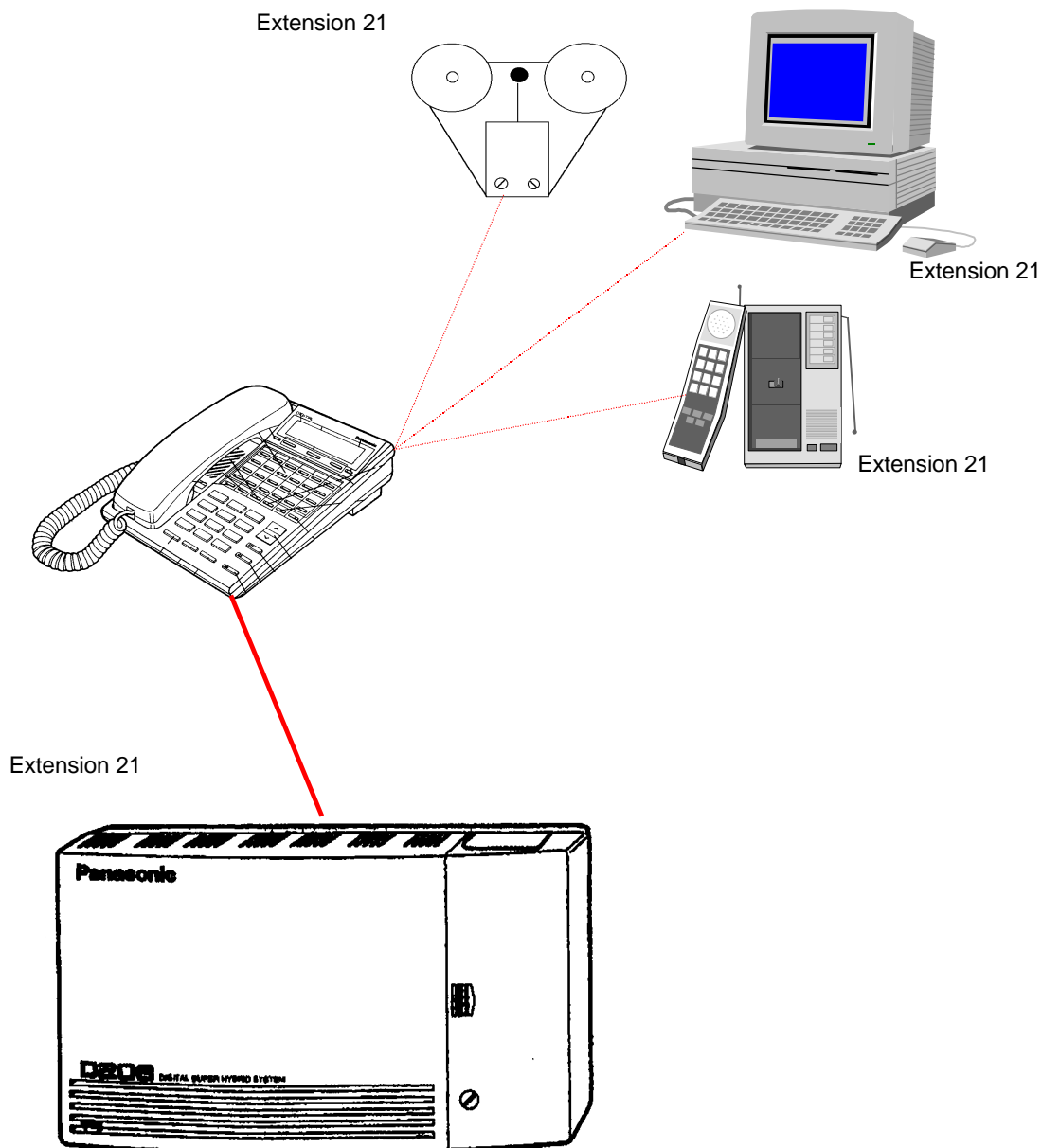
Parallel Connection

Description

Proprietary telephones may have an SLT (Single Line Telephone) connected to the same extension port sharing the same extension number. If the 7000 series has a paralleled SLT and both phones are off hook during a call, a three way conference is established. If the combination of telephones is digital and an SLT if one telephone goes off hook during a call the call will be transferred to it. The connection can be made simply by plugging the SLT into the back of a digital telephone. The connection can also be made by wiring the devices in parallel.

Benefits

An extension user with a keyphone could have a loud ringing bell, PC with modem or cordless telephone connected to their extension. It can also provide a simple "dial up" LAN passing data through the system from PC to PC or out onto the network



XDP (eXtra Device Port)

Description

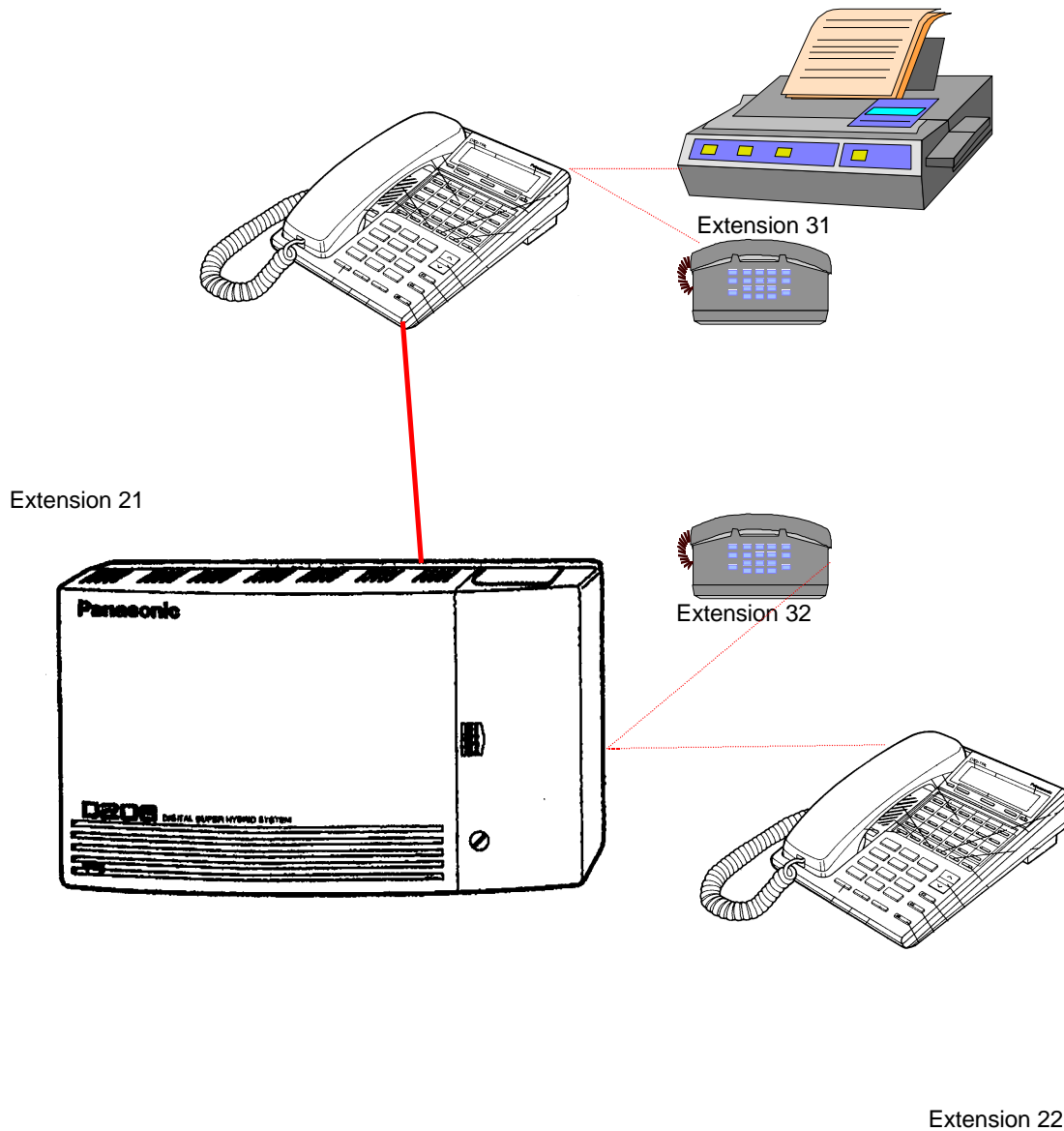
When connecting an SLT in parallel with a digital proprietary telephone the SLT may operate as a separate extension with its own extension number and programmable parameters. The SLT device can be simply plugged into a digital keyphone or wired separately to a different part of the building.

Benefits

This feature can be used to double the maximum number of extensions which can be fitted to the available ports. Example:

a 4 x 12 size system could have up to 16 individual extensions. Provides an easy and inexpensive way of installing a new extension. The system offers total flexibility as to what may be connected e.g. cordless, credit card verifiers etc.

Example



Answering Calls

Flexible Ringing Assignment

Description

The ringing assignment is completely flexible so any line can be assigned to ring at any extension(s). The ringing assignment can be different in day and night modes depending on user requirements

Benefits

Assures coverage for outside lines, increases customer satisfaction. Allows for customisation of the system in order to meet a wide variety of applications.

Delayed Ringing

Description

The delayed ringing assignment is completely flexible so that any line can be assigned to ring at any extension(s). Extensions can be set to ring after 1, 3, or 6, rings delay. The ringing assignment can be different in day and night modes depending upon user requirements.

Benefits

Assures coverage for outside lines if unanswered at the first (immediate ringing) pattern of extensions. Increases customer satisfaction. Allows for customisation of the system in order to meet a wide variety of applications.

Group Ringing

Description

The KX-TD208E can support up to 8 ringing groups of up to 12 members each, for ISDN DDI, or analogue incoming calls.

The group is accessed by dialling the number allocated as representing the group. When a call is passed to a group ringing is presented and all idle extensions in the group ring. If an extension that was busy when the call arrived becomes idle before the call is answered it will begin to ring.

Calls can be transferred to a group from another extension.

If the group is busy and an incoming exchange line call is received the group will be continually searched until an extension becomes free or the reversion timer has elapsed. Multiple calls can be directed to a busy group.

If the call is not answered before the intercept timer has elapsed then the call will ring at the nominated extension.

Uniform Call Distribution

Description

The KX-TD208E can support up to 8 ringing groups of up to 12 members each, for ISDN DDI, or analogue incoming calls.

The group is accessed by dialling the number allocated as representing the group. When a call is passed to a group ringing is presented to the first idle extension with a higher extension number than the extension which answered the last call. If the highest extension number is reached the system will start at the lowest extension number again. This will ensure that the number of calls answered by each extension is more equal than with hunting only on busy.

Calls can be transferred to a group from another extension.

If the group is busy calls can be queued onto a group and will be answered in turn. Multiple calls can be directed to a busy group. The log-in / log-out button will flash if there are people queuing on the group.

If the call is not answered before the intercept timer has elapsed then the call will ring at the nominated extension.

Login and Logout of Hunt Groups

Description

Extensions programmed as part of any type of hunt group may "Login" and become part of the hunt group. The same extensions may also "Logout" and therefore not be included as part of the hunting process. The login/logout feature key's LED will indicate the status of the extension.

Useful if the personnel answering incoming calls vary at times throughout the day.

TAM Pickup

Description

Allows calls which have been answered by the TAM to be retrieved by any extension. If a call has been answered by the TAM the call can be retrieved and the extension user may speak to the caller.

Benefits

Very useful where a telephone answering machine may be left on to take calls during busy periods it allows extension users to take calls back from the answering machine and talk to the callers.

Call Pick Up (Exchange line / Group / Direct)

Description

Exchange line pick up allows an extension user to only answer incoming exchange line calls by pressing either a feature button, pre-programmed flexible key or by dialling a code.

Group call pick up allows a user to answer calls for other extensions in the same pick up group by activating a feature button or dialling an access code.

Direct call pick up allows a user to answer a specific ringing extension by dialling an access code followed by the extension number. The alphanumeric display advises the extension picking up the call of the calling extension or exchange line.

Benefits

Provides improved call coverage by allowing extension users to answer ringing stations without leaving their desk.

Off Hook Signalling

Description

When a user is talking on an outside line, they may be alerted of another incoming call by the system sending a call waiting tone.

Flexible Function Keys

Description

The Flexible keys can be programmed to access a feature by pressing a single button. The features which can be placed under a key are as follows:

1	Exchange line key	15	Group call pick-up
2	Direct line access	16	Loud ring bell pick-up
3	Pooled / Group line key	17	Speed dial
4	Extension selection key	18	Message recall
5	Paging access	19	Message cancel
6	'Meet me' paging answer	20	Save / repeat dial
7	Call park	21	Conference key
8	Message key	22	Personal speed dial
9	Do not disturb	23	Night transfer
10	Call forward	24	Exchange line answer key
11	Absence message	25	Forward key
12	Alarm	26	Conference key
13	Station lock	27	Any feature accessible by dialling a code.....
14	Directed call pick-up		

NOTE: Feature keys can be programmed by the user on each telephone or by the system manager

Benefits

This provides the flexibility to customise a phone to the customers needs. It makes easy, one step feature access available as an alternative to feature access codes.

Flexible Night Service

Description

When the system is placed into night mode the extensions can be assigned to ring on a per line / per extension basis, differently than during the day mode. In addition, the call restriction can be changed. The night service can be set to turn on and off automatically at a set time per day of the week.

Benefits

Provides flexible ringing for businesses with extended hours of operation or shift working. Enhances management control of call abuse by providing different call restriction options for night operation.

Call Charge Management

Description

Any phone can print the call charges for extensions and departments on the printer as follows:

1. Cost of calls on a specific extension
2. Cost of calls on all extensions
3. Cost of calls on a specific department code
4. Cost of calls on a specific account code
5. Reset the cost of calls for a specific extension
6. Reset the cost of calls for all extensions
7. Reset the cost of calls for a specific department code
8. Reset the cost of calls for all department codes
9. Reset the cost of calls for a specific account code

Note: This facility is only provided by ISDN Q931 exchange lines. Lines not fully compliant with this specification may not provide the required information to the system.

Benefits

Allows a simple way to monitor call abuse and exchange line usage

Operator Features

Description

This feature allows the operator to set and cancel the following features

Can set for use by all extensions:

Time and Date
System Speed Dial Numbers
Emergency Dial Numbers

Can set for specific extensions:

Extension Lock
Class of Service Primary / Secondary

Can cancel for a specific extension:

Incoming Call Information Lock
Extension lock

Benefits

Allows the operator to monitor and update many system features.

Holding Calls

System Hold

Description

This feature allows an extension to put a call on hold and for the call to be retrieved from any phone by pressing the associated line key. If the incoming call is an exchange line then pressing a DSS key will automatically place the call onto system hold for the purpose of transferring the call. If the incoming call is an exchange line and another exchange line key is pressed the first exchange line call will be placed on system hold *.

* *New feature*

Benefits

Allows a call to be held whilst another operation is carried out.

Transferring & Intercom Calls

Internal Voice / Tone Calls

Description

The KX-TD208E can be set up to either voice call or tone call for intercom calls. With a voice call the caller's announcement is heard over the speaker of the called extension if it is not busy. The recipient can then use the handsfree answer-back if their extension supports the facility. Tone call will sound a tone at the receiving extension until the call is answered or the caller hangs up. This option is set up through extension programming.

Benefits

Allows each customer to select which method would best suit their business environment.

Transfer (screened / unscreened)

Description

The screened transfer feature requires that the called extension has answered and the call is announced before the transfer takes place.

The unscreened feature allows extension users to transfer their internal or external calls without having to announce the caller.

Unanswered calls will return to the extension that originated the transfer or to the operator.

Benefits

Provides efficient call processing
User friendly operation

Conference Calls

Description

This feature enables the user to conference up to 3 internal, 1 external and 2 internal or 2 external and 1 internal parties, as the system is digital, there is no internal loss.

Hunt Group

Description

The KX-TD208E can support up to 8 ringing groups of up to 12 members each, for ISDN DDI or DIL incoming calls.

When a call is passed to a group ringing is presented and all idle extensions in the group ring.

Calls can be transferred to a group from another extension. The group is searched for free extensions when the extension calls the group.

If the group is busy and a forced transfer is performed the group will be continually searched until an extension becomes free or the reversion timer has elapsed. Multiple calls can be transferred to a busy group. The number of calls which may be sent to a busy group can be set through programming.

Calls may be set to overflow a the nominated receiving extension for each group if the call has been queuing in excess of the intercept timer

If the call is not answered before the recall or reversion timers have elapsed then the call will recall to the transferring extension or the operator.

Locating Calls

Paging With Meet Me

Description

The KX-TD208E has eight paging zones these are the 8 internal extension groups. The internal groups can be paged simultaneously.

Paging will not be heard from the speakers of extensions which are busy.

A "meet me answer page" allows a user upon being paged to be connected to the extension paging by entering a code.

Benefits

Improves efficiency in locating personnel by providing dial access to paging equipment and to extensions in designated paging zones.

Improves customer service by providing faster response time to calling parties.

Camp On

Description

This feature allows extensions to queue calls to a busy extension.

The camp on tone can be programmed on a per extension basis.

Benefits

Saves time and improves productivity by eliminating repeated dialling to gain access to busy extensions.

Call Waiting

When an outside caller or another extension "camps on" to the phone. By pressing the flashing line or intercom button you can talk to the other caller. The current call is automatically terminated unless the hold feature is used. This feature allows switching between calls.

Benefits

Allows waiting calls to be answered quickly.

Outgoing Calls

Pooled Exchange Line Access

Description

A group of outside lines can be combined together under one line key, for access to outside lines. When there are available routes the LED will remain off or green if you are currently using a line in the group, when all routes are busy the LED will show red.

Benefits

This allows for maximum utilisation of the line keys on a key telephone.

Trunk Queuing (Exchange Line Camp On)

Description

If an exchange line or line group is busy a user can dial "6" after receiving busy tone, so when the line becomes available the system will ring the extension and reserve the line for the extension.

Benefits

Increases productivity by allowing users to continue working while waiting for an available line. Eliminates the need to manually monitor lines.

Speed Dialling - Personal

Description

Any of the extensions can store up to ten personal speed dial numbers which are unique to that extension.

Benefits

Saves time and increases productivity by allowing the extension user to use abbreviated dialling to access frequently called numbers.

Note: Personal speed dial numbers do not override call barring.

Speed Dialling - System

Description

There are 100 system memory locations. Any number up to 24 digits in length can be stored in a memory location. The system speed dial numbers can be assigned to override call restriction on a class of service basis.

Benefits

All extensions can share a common list of frequently dialled numbers.

Last Number Re-dial

Description

Pressing the REDIAL key re-dials the last number dialled without having to clear the line. If the line has been cleared the re-dial key will re-seize the line and re-dial the last number dialled.

Benefits

Saves time and frustration when trying to reach a busy number.

Save / Repeat Dial

Description

This feature allows the extension user to store a dialled number by using the SAVE button, or a feature key assigned as a save button during an outside call and later re-dial the number even if other calls have been made since the original number was saved.

Benefit

Allows other calls to be made if a called party is busy without the need to look up the number again.

Least Cost Routing (LCR)

Description

With least cost routing feature, the system can choose the most cost-effective outgoing network based on the outside number dialled. After the outgoing destination number is dialled, the LCR stores and examines the number on the basis of area code used, the time of day and day of week.

The system will then check the restriction level of the user. If allowed the system will check the route of the dialled number.

Up to five different carriers can be connected directly or indirectly to the KX-TD208E. Priorities may be set for either time of day (eight sets of tables) and days of week (eight patterns).

Benefits

Improves management of telephone expenses by providing automatic routing of outgoing calls over the most economical facility available.

ISDN2 Q931 (Euro ISDN) Interface

The ISDN2 interface and associated equipment allows the connection of Basic Rate ISDN to the KX-TD208E. A maximum of 4 ISDN2 channels can be connected to one KX-TD208E cabinet. Connection of the digital circuits will reduce the number of analogue lines which can be connected to the system.

ISDN2 Features

The following features are supported by the KX-TD208E ISDN2 (Q931) interface

Direct Dial In	(DDI)
Call Charge Information	(CCI)
Calling Line Identity	(CLI)

DDI requires rental of network services.

Note : CCI is not currently supported by the BT network.

ISDN2 Feature Descriptions

Direct Dial In

The network can send the last digits of the number dialled by the caller to the KX-TD208E. This string can be 1 to 6 digits in length dependant upon configuration and network services being subscribed to by the user. The KX-TD208E will use these digits to route the call to a specific extension or group of extensions using a look-up table.

Call Charge Information

When using the ISDN2 interface the KX-TD208E can receive the cost of the call whilst in progress and display it on the LCD display. On completion of the call print the precise cost of the call as part of the call logging output. The cost of calls made by a specific extension can also be printed as a report.

The call charge is sent to the KX-TD208E during the call. This data can be printed on the call logger and displayed on the digital telephones with LCD.

Note : This feature is not currently supported by BT.

Calling Line Identity

The calling party's number can be displayed on a keyset with LCD.

Euro (Q931) ISDN2 Extensions

Description

The KX-TD208E can provide an ISDN2 extension circuit for the use of devices such as Video Telephones, Group 4 Facsimile machines, ISDN2 High Speed Modems, and Video Conferencing. The ISDN2 extensions provide ISDN2 to the Euro ISDN (Q931) standard. Any device capable of being connected to an ISDN2 (Q931) line supplied by British Telecom may be used as an extension of this PBX. The KX-TD208E will provide 2 channels of 64Kb each and full Euro ISDN functionality to the desk. ISDN2 devices will no longer require a line each.

An ISDN2 extension port will support up to 8 ISDN2 terminals and provides multiple subscriber numbering to address the devices individually.

Note : Each ISDN2 extension will reduce the number of available ISDN2 exchange line ports.

Call Barring

Description

Call barring in the KX-TD208E allows the control of access to outside lines on a per class of service basis. This restriction can vary in the day or night mode. The eight classes of restriction are as follows:

Level	Restriction
1	No restrictions
2	20 area codes may be denied and 100 exceptions may be specified
3	40 area codes may be denied and 80 exceptions may be specified
4	60 area codes may be denied and 60 exceptions may be specified
5	80 area codes may be denied and 40 exceptions may be specified
6	100 area codes may be denied and 20 exceptions may be specified
7	999, 112 and Intercom calls only
8	999, 112 and the PBX operator only

Access to dialling using the SSD may also be allowed / disallowed on a system wide basis.

For each area or exception code up to 7 digits may be entered. The level used when an extension is locked is level 7.

"*", "#" or RECALL may be checked to ensure correct operation of the call barring system.

Benefits

Controls call costs and prevents call abuse by providing automatic blocking of calls placed to restricted numbers.

Call Logging Interface

Description

By attaching a serial printer or call management system to the RS232C port , a detailed record of all incoming and outgoing calls can be kept for future reference.

The data contains information on the date and time of the call, the extension making or receiving the call, the exchange line number, the number dialled or the callers number, the time to answer, length of the call, the account code used and whether the call was forwarded or transferred.

When using the ISDN interface the KX-TD208E can receive and print the precise cost of the call upon its completion, as part of its call logging output (Q931 only).

Benefits

Provides accounting management tool for allocation of telephone expenses. Identifies areas for system or feature upgrade. Provides customer with record of telephone usage which can be used in making budgetary and planning forecasts. Prevents telephone abuse and misuse by identifying unauthorised outgoing calls.

Call Logging Indication

The call logging output shows calls which have been forwarded or transferred, when modem access has occurred and incoming calls.

The condition codes are shown below:

Condition Code	Meaning
<INCOMING>	Incoming call.
<Private>	Private incoming call.
TR	The call was transferred.
FW	The call was made because the extension number called was set to forward to an external number.

Call Logging Output

Date	Time	Ext	Dpc	Port	Dial Number	ANS	Duration	Cost:£	Acc Code	CD
24/06/96	9:00AM	200	12345	1	01344853506		00:05'12	12.00	12345	
24/06/96	9:10AM			1	<INCOMING>	00'12				
24/06/96	9:20AM	200		1	<Private>	00'10	00:20'12		12345	TR

Note: Lost calls are indicated by a ring time and no duration i.e. the system was rung but the call was not answered.

Other Features

Flexible Line Assignment

Description

The function keys on the keysets can be used to display lines connected to the system in a 3 different ways.

1. Direct appearance (1 line per key) of each exchange line.
2. Each key representing an exchange line group.
3. Pooled line appearance (all lines unassigned to other line keys grouped under one key)

The keys can be programmed to show the lines in any order and group and single line keys can be mixed on the same extension.

Benefits

Provides for private line ability.
Separates departments.
Conserves the number of keys to use for other features.

Idle Line Preference

Description

Idle line preference allows a user to automatically select an idle exchange line for dialling out when the hand-set is lifted or speakerphone is activated eliminating the need to manually select a line.

Intercom calls can still be made by pressing the ICM (Intercom) button.

Benefits

Provides external dial tone for each call for any user who makes more external calls than internal.

Prime Line Preference

Description

Prime line preference allows a user to automatically select a pre-set line for dialling out on when the hand-set is lifted or speakerphone is activated, thus eliminating the need to manually select lines.

The line is specified through programming of the extension. Intercom calls can be made by pressing the ICM (Intercom) button.

Benefits

Eliminates a step for dialling out.
Allows for better control of specific lines set for specific extensions.

Account Codes

Description

This feature allows a user to enter an accounting code or a client billing code (up to 5 digits) which will print out with the call record on the printer. The account code entry can be voluntary or forced dependant upon requirements.

Benefits

Provides cost accounting tool to allocate telephone expenses (outgoing call costs) to specific clients/departments.

Provides verification of correct entry by checking the account code entered against those programmed in the system.

Provides record keeping confidentiality by allowing account code entry without interruption to ongoing conversation.

Ideal for Lawyers, accountants, etc.

Headset Connection

Description

All digital keyphones and the KX-T7130E are headset compatible. Headset operation can be set and cancelled through individual hand-set programming. When headset operation is activated all audio is switched to the headset, including speaker audio.

Benefits

Allows headset operation at any extension thereby increasing the efficiency.

Extension Lock

Description

Each telephone can be locked using a three digit code, which when entered locks the extension. External calls will be disabled except 999 and 112.

Benefits

Provides added control over telephone usage.

Automatic Answer

Description

All keyphones with a speakerphone, are equipped with an automatic answer button for intercom calls. When an internal call is received the extension user being called can reply to the caller without lifting the hand-set.

Benefits

Simplifies call processing by allowing internal calls to be answered without having to pick up the hand-set. Ideal for hands free environments such as engineers, architects, executives, doctors etc.

Automatic Recall

Description

All calls transferred through extensions and left unanswered will automatically revert back to the transferring extension (or the operator) after a set time. The KX-TD208E has an adjustable recall timer.

Benefit

Improves customer service by ensuring that calls are processed and handled within a given time.

On Hook Dialling

Description

There is no need to lift the hand-set when placing a call with any keyphone. When placing a call simply press the line or SP-PHONE/MONITOR key and dial the required number. Also, while in a conversation, it is possible to monitor the conversation by simply pressing the SP-PHONE/MONITOR key and replacing the hand-set. If you are using a non speaker phone simply pick up the hand-set to continue your conversation.

Benefits

Increases productivity by freeing up users and allowing them to do paperwork, etc.

Alarm

Description

Each extension may set the system to call back at a specific time as a reminder of an event or meeting.

Benefits

Provides a built in alarm function.

Volume and LCD Contrast Adjustment

Description

There are different volume control functions available to keysets on a per extension basis. One volume control for the speaker, another for the ringer and one for the hand-set receiver. It is also possible to adjust the LCD display contrast.

Dual Colour LEDs

Description

Each exchange line key has a dual colour LED. Red is a busy line and green is the line you are speaking on. When a key is assigned as a BLF these dual colours are also utilised to indicate busy extensions, extensions that are in a DND mode, and extensions that are in a call forward mode.

Benefits

Lets you know which line you are talking on, especially when a call is put on hold.
When a call is transferred to another extension, in addition to ringing, the line will also flash green indicating which line is being transferred.
Applications include manager /secretary operation.

Microphone Mute

Description

Users have the ability to switch off their microphone for privacy.

Benefits

To ensure privacy while using the speakerphone.

Doorphone Interface

Description

A door-phone can be attached to each system, which may be set to ring on any combination of extensions. The doorphone interface also contains a relay to control a door release mechanism for the doorphone.

The opener can be controlled via any extension.

Benefits

Provides security for companies in which entrances may be left unattended.

Do Not Disturb

Description

Do not disturb enables any extension user to stop all intercom and exchange line calls from ringing on their extension. When activated a do not disturb signal is sent to the calling party. Any extension can also have the privileged of overriding do not disturb set through programming. Any DSS button corresponding to an extension set to do not disturb will illuminate red.

Benefits

Enables user to quickly and easily initiate privacy for important meetings, etc.

Call Forwarding

Description

Incoming calls (internal and external) can be routed to another extension by pressing the feature key, pressing a flexible key assigned as "call forward" or by dialling the call forward code and then the extension number or external number. The name of the extension or outside line number of the calling party appears on the display of the destination extension.

There are 6 kinds of call forward:

1. All calls
2. Busy
3. No Answer
4. Busy / No Answer
5. To external number
6. Follow me
7. ISDN Controlled

Benefits

Ensures immediate call coverage for personnel that are out of the office and not part of a hunt group.

Note: to allow exchange line to exchange line forwarding to operate both exchange lines must be ISDN.

Call Forward Indication On Display

It is possible to display the call forward indication on the display of a keyset, when an extension sets call forward. This is useful when many users will be setting forward to voicemail or another extension and wish to see where the call has been directed.

Hunt Groups

Description

This feature enables calls to be directed to a specific group of extensions and for the call to "hunt" for a free extension in that group. There are up to eight hunt groups with up to 20 members in each group.

There are four types of hunt groups circular, terminate, UCD and Ring. Circular allows entry to the group on any extension number and hunts upward through the group to the highest number and then starts at the lowest extension number and will only give busy tone if all members are busy. Terminate will hunt upward through the group to the highest extension number in the group it will return busy if all members searched are busy. Group all idle extensions within the hunt group will ring. Uniform Call Distribution this mode provides circular hunting but will start hunting at the next highest extension number to that which answered the previous call to the huntgroup.

Benefits

Allows calls to be routed to departments or voicemail without the need to re-dial if an extension is busy.

Pulse / DTMF Dialling

Description

Each of the exchange lines can be programmed for DTMF (dual tone multi frequency) or loop disconnect (pulse) dialling on a per line basis.

Benefits

This allows for different types of lines to be attached to the system without the need for special equipment.

Exchange Line to Exchange Line Transfer

Description

Incoming or outgoing exchange line calls may be transferred by an extension to another external telephone number.

Benefits

A very useful facility if the business has personnel who may be working from home. The business will not need to give callers the home workers number to dial direct they can simply transfer the call. To the outside caller the home worker will appear as if they were an extension on the KX-TD208E.

Call Forward Exchange Line to Exchange Line

Description

Any extension user on the KX-TD208E may set their extension to direct their calls to an external telephone number i.e. a mobile number when they are out of their office. Internal, DDI, DIL and transferred calls will be redirected to the mobile telephone.

Benefits

Makes personnel who are out of the office appear as if they were an extension on the KX-TD208E.

Automatic Call-back Busy

Description

If the extension or exchange line selected is busy it is possible to use the automatic call-back busy feature so that when the extension or line becomes free your extension will ring. Upon lifting your receiver or pressing speakerphone the other extension will ring or you will receive external dial tone from the exchange line. Using your telephone whilst having automatic call-back busy set will not cancel the feature. If you wish to cancel automatic call-back busy this can be done by means of a code.

Benefits

Saves time making repeated attempts to access an extension or line, or monitoring the status of a line or extension you are automatically alerted when it becomes free.

Budget Management

Description

The system can be set so that extension users are disconnected from their exchange line call when the cost of that call reaches a certain limit.

Benefits

Controls the cost of calls made by users of the KX-TD208E system.

Note: requires call charge information to be provided real time by the ISDN (Q931) exchange line.

Class of Service

Description

Each extension is allocated a class of service. The class of service determines the following:

1. Call barring level day
2. Call barring level night
3. Exchange line call duration limit
4. Whether the extension is permitted to call forward calls to an external number
5. If the extension is allowed to override do not disturb
6. If the extension is forced to enter an account code to make external calls.
7. The level of call barring applied to system speed dial numbers used by an extension
8. If the extension may use the door opener
9. Whether the extension may set the system into or out of night service
10. If the extension is permitted to set DND for DDI calls
11. If the extension may use call forward - follow me
12. Whether the extension may use CLIR (Calling Line Identification Restriction)
13. Whether the extension may use COLR (Connected Line Identification Restriction)
14. If the extension may use the ISDN controlled call forward services

Benefits

Controls the level of facilities and features available to extensions.

Primary / Secondary Class of Service

Description

Each extension has two classes of service assigned to it. The operator can alter which class of service applies to an extension and therefore control the facilities available.

Benefits

Useful for controlling calls made by any extension. If the user of the extension is absent calls of a certain type can be controlled by the operator.

Connected Line Identification Restriction

Description

When an incoming call arrives at the KX-TD208E system on an ISDN line the telephone number of the line is has arrived on is presented to the caller as confirmation of the number reached. The KX-TD208E is capable of disabling this confirmation to the caller.

Benefits

If the call has been forwarded to the KX-TD208E system from elsewhere the caller is not to know that the call has been re-directed.

Data Line Security

Description

When enabled data line security prohibits the intrusion of unwanted tones into a call. It allows data transmissions to be free of the corruption which would otherwise result if tones such as call waiting were to interfere with the transmission.

Benefits

Ensures the integrity of data (or fax) transmissions and ensures that they are free from corruption.

Direct Dial In (DDI)

Description

Direct dial in is an ISDN feature. The user of the KX-TD208E will rent a series of numbers from the network provider. The network provider sends some of the number dialled to the KX-TD208E. The KX-TD208E in turn translates the number dialled to a specific extension.

Benefits

Allows callers to dial direct to the person (or facility*) they require.

Do not disturb (DND)

Description

Do not disturb may be set by an extension user. When an internal call is made to an extension with this set the caller can hear a specific tone which indicates that this feature has been set on it. Incoming exchange line calls also will not cause the extension to ring.

New Feature - A backup extension can be set-up so that when a call is made to an extension set to DND it will automatically be forwarded to the backup extension.

Benefits

Allows the extension user to choose when they are able of unable to take calls. For example it would stop calls arriving at your extension whilst you are in a meeting.

DND for DDI calls

Description

If allowed in the extension user's class of service they may set do not disturb for their direct dial in calls. In this mode the extension user's calls are all directed to the operator.

Benefits

Ensures that DDI calls never need go unanswered. If the extension user is absent from their telephone or unable to take calls they can be re-directed so that the caller can be helped by someone else.

Extension Connection

Description

Allows any unused extensions to be disabled

Benefits

Ensures that non working extensions cannot be called or used.

Day / Night Service

Description

The day / night service modes can be set by an operator. The features which can differ between day and night service are:

1. DIL 1:1 (Direct In Line) Ringing pattern
2. DIL 1:N Normal Ringing Pattern
3. Intercept Extension
4. Call barring level for extensions
5. Outgoing Lines
6. Doorphone ringing pattern

New Feature - Any extension may set the day / night mode if this facility has been allowed in it's class of service.

Benefits

The facilities available during normal working hours can be restricted at night. For example callers can be directed to answering devices and outgoing calls can be restricted.

Notebook Function

Description

This feature allows the extension user to store a number into their save button during a conversation.

New Feature - A number may be stored into the save button when the handset is on-hook.

Benefits

Allows a number to be stored to be dialled later but still allows calls to be made in between.

Paging Deny

Description

Any extension user may prohibit paging calls from being heard through their extension's loudspeaker.

Benefits

This feature excludes those telephones which do not wish to receive "page all" announcements.

Pre-dial

Description

An extension user may enter the telephone number before going off-hook. The number dialled can be checked before dialling. Once a number is entered going off hook causes the call to be made.

Benefits

Reduces the risk of mis-dialling

Private Call

Description

By entering a pre-set account code the dialled number may be omitted from the SMDR output.

Benefits

Useful if the number being called should not be disclosed.

Quick Dialling

Description

This feature allows single button access to extensions.

Benefits

Allows single button access to personnel providing a specific function to internal callers. For example room service.

DDI

Description

Direct Dial In to the main published number may be set for day mode and night modes separately.

Benefit

When staff are present during the day DDI may be in operation. At night for example it may be preferred to ring multiple extensions when an incoming call arrives so that calls may be answered by anyone in the office.

Intercept Routing

Description

Each channel can have an extension, all extensions or ring group assigned which will receive calls if they are unanswered by the receiving extension.

Benefit

Ensures that calls never go unanswered, extensions or groups where personnel may not always be present may have their unanswered calls diverted automatically to an operator.

Call Transfer to Extension

Description

When a call is transferred to an extension with automatic answer set, the intercom caller may speak to the called extension through the speakerphone of the called party. When the calling extension goes on hook to transfer the exchange line call the call will revert to ringing at the called extension.

Benefit

Ensures that the called party is aware of when the intercom call ends and the exchange line call starts.

ISDN Controlled Call Forward (CFU/CFNR/CFB)

Description

Extensions may use the ISDN call forward facilities. The type of call forwards supported are:
CFU (Call Forward Unconditional)
CFNR (Call Forward No Reply)
CFB (Call Forward Busy)

Benefit

Complements the KX-TD call forward to CO feature. The KX-TD feature does not require payment of any additional subscription to the service provider. However the ISDN call forward facility will re-direct calls without use of two exchange lines to do so.

**Panasonic Digital Super Hybrid System
Product Description**

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