

16.1 S

16.1.1 SMDR (Station Message Detail Recording)

Description

Automatically logs detailed information for each extension.

1. SMDR Output Port

The Serial Interface (RS-232C) port can be used to output Station Message Detail Recording (SMDR) data to a PC, printer, etc.

2. SMDR Output Data

The following data can be recorded and sent to the SMDR output port:

- a. CO line call information (incoming/outgoing)
- b. Intercom call information (outgoing)
- c. Log-in/Log-out information
- d. PBX error log (→ 10.1.4 Local Alarm Information)
- e. Hospitality feature information (→ 8.1.4 HOSPITALITY FEATURES)
- f. Printing Message information (→ 13.1.11 Printing Message)

Memory for SMDR: A specified number of records (data) can be remembered by the PBX. When memory is full, the oldest data is overwritten by new data.

With KX-TDA100/KX-TDA200/KX-TDA600, when an EMEC/MEC card is installed, the number of SMDR records that can be stored will increase.

3. SMDR Format Type and Contents

The following three types of output format can be selected through system programming:

Pattern A: 80-column text without call charge information

Date (8 digits)	Time (7)	Ext (5)	CO (2)	Dial Number (25)	Ring (4)	Duration (8)	ACC Code (10)	CD (3)
01/02/02	10:03AM	1200	01	<I>12345678901234567890	5'15	00:00'00		NA
01/02/02	10:07AM	1200	01	<I>	0'05	00:01'05	9876543210	
01/02/02	10:15AM	1200	01	1234567890123456		00:01'05	9876543210	TR
01/02/02	10:30AM	*123	01	1234567890123456		00:01'05	9876543210	
01/02/02	01:07PM	1234	01	<I>ABC COMPANY12345678	0'05	00:01'05	9876543210	
01/02/02	01:07PM	1234	01	<D>CDE9876<I>Q COMPANY	0'05	00:01'05	9876543210	
01/02/02	01:07PM	1234	01	ABC COMPANY12345678		00:01'05		
01/02/02	01:07PM	1234	01	123.....		00:01'05		
01/02/02	01:07PM	1234	01	123456XX		00:12'05	98765	
01/02/02	08:33AM	1234		In the office				
01/02/02	01:07PM	1234		LOG IN				
01/02/02	03:35PM	1234		LOG OUT				
01/02/02	03:45PM	1234		EXT1235				
01/02/02	03:50PM	1234		Check in				
01/02/02	03:55PM	1234		Check out				
01/02/02	04:00PM	1234		Timed Reminder/Start				
01/02/02	04:01PM	1234		Timed Reminder/No Answer				
01/02/02	04:01PM	1234		Timed Reminder/Answer				
01/02/02	04:05PM	1234		<I>S003				RC
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

Pattern B: 80-column text with call charge information

Date (8 digits)	Time (7)	Ext (5)	CO (2)	Dial Number (20)	Duration (8)	Cost (8+2)	ACC Code (10)	CD (3)
01/02/02	10:03AM	1210	01	< >				NA
01/02/02	10:07AM	2005	01	1234567890123456789	00:00'05	00560.00	EU 9876543210	
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
(1)	(2)	(3)	(4)	(5)	(7)	(10)	(8)	(9)

120-column text

Date (8 digits)	Time (7)	Ext (5)	CO (4)	Dial Number (50)	Ring (4)	Duration (8)	Cost (8+3)	ACC Code (10)	CD (3)
01/02/02	10:03AM	1230	0001	123456789012345678901234567890		00:00'05	00560.00	EUR 9876543210	TR
01/02/02	10:07AM	1230	0001	< >ABC COMPANY123456789012345	0'05	00:00'05		9876543210	TR
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(10)	(8)	(9)

[Explanation]

The following table explains the types of data logged by SMDR. Each description below refers to data indicated above by the numbers in the parentheses.

Number in the Pattern	Data	Description
(1)	Date	Shows the date of the call.
(2)	Time	Shows the end time of a call as hour/minute/AM or PM.
(3)	Ext (Extension)	Shows the extension number, floating extension number, etc., which was engaged in the call. Also shows the following codes: Dxxx : Outgoing CO line call from a doorphone (xxx=doorphone number) (→ 4.1.11 Doorphone Call) Txxx : Outgoing CO line call made via TIE line service (xxx=trunk group number) *xxx : Verified call (xxx=verification code) (→ 19.1.1 Verification Code Entry)
(4)	CO	Shows the CO line number used for the call. For patterns A and B, "00" will be shown for CO line numbers over hundred.

Number in the Pattern	Data	Description
(5)	Dial Number	<p>[CO Line Call] Outgoing CO Line Call Shows the dialed telephone number. Digits shown are as follows: 0 through 9, *, # P: Pause F: External Feature Access (EFA) signal =: Host PBX Access code (→ 8.1.5 Host PBX Access Code (Access Code to the Telephone Company from a Host PBX)) . (dot): Secret dialing -: Transferred call If the transfer destination extension enters additional digits, those digits will be added after "-".</p> <p>Incoming CO Line Call Shows <I> + the caller's identification name/number. It is also possible to show the DID call information. In this case, <D> + DID name/number is added before <I>.</p> <p>[Outgoing Intercom Call] Shows the dialed extension number followed by "EXT".</p> <p>[Log-in/Log-out] Shows the Log-in or Log-out status.</p> <p>[Check-in/Check-out] Shows the check-in or check-out status. (→ 15.1.3 Room Status Control)</p> <p>[Timed Reminder] Shows the status of a timed reminder, either "Start", "No Answer", or "Answer". (→ 17.1.4 Timed Reminder)</p> <p>[Printing Message] Shows the selected message. (→ 13.1.11 Printing Message)</p> <p>[Sensor Call] Shows calls from an external sensor as follows: <I> S + sensor number. (→ 5.1.9 External Sensor)</p>
(6)	Ring	Shows the ring duration before the call was answered in minutes/seconds.
(7)	Duration	Shows the duration of the CO line call in hours/minutes/seconds.
(8)	Acc Code (Account Code)	Shows the account code appended to the call. (→ 1.1.2 Account Code Entry)

Number in the Pattern	Data	Description
(9)	CD (Condition Code)	Shows other call information using the following codes: TR: Transfer FW: Call Forwarding (FWD) to CO line DO: Call using Direct Inward System Access (DISA) or TIE line service RM: Remote maintenance (modem) (→ 13.1.6 PC Programming) NA: Not answered call RC: Received call AN: Answered call VR: Received call with Call Waiting Caller ID (Visual Caller ID) VA: Answered call with Call Waiting Caller ID (Visual Caller ID)
(10)	Cost	Shows the call charge. This is not available if your telephone company does not provide a call charge reporting service.

The following data can be controlled through system programming to adjust whether (or how) they are printed or displayed by SMDR

[Programmable Items]

Item	Description
Outgoing CO line call	Controls whether outgoing CO line calls are shown. This setting is common throughout the PBX. COS programming is also required. 13.1 [11-1] Main—SMDR—◆ Print Information—Outgoing Call [804] SMDR Outgoing Call Printing
Incoming CO line call	Controls whether incoming CO line calls are shown. 13.1 [11-1] Main—SMDR—◆ Print Information—Incoming Call [805] SMDR Incoming Call Printing
Outgoing intercom call	Controls whether outgoing intercom calls are recorded. 13.1 [11-1] Main—SMDR—◆ Print Information—Intercom Call
Log-in/Log-out status	Controls whether the Log-in/Log-out status of extensions is recorded. 13.1 [11-1] Main—SMDR—◆ Print Information—Log-in / Log-out
ARS dial	Controls whether the user-dialed number or the ARS-modified number is shown. The Host PBX Access code ("=" followed by the access code) can be shown (as supplementary information) only when the modified number is selected in this setting. (→ 1.1.3 ARS (Automatic Route Selection)) 13.1 [11-1] Main—SMDR Options—◆ SMDR Options—ARS Dial

Item	Description
Caller's identification	Controls whether the caller's identification number, name, number and name, or nothing is shown. If "none" is selected, <I> will not be shown. 13.1 [11-1] Main—SMDR Options—◆ SMDR Options—Caller ID Number & Name
DID number	Controls whether the DID numbers, names, numbers and names, or nothing is shown. If "none" is selected, <D> will not be shown. 13.1 [11-1] Main—SMDR Options—◆ SMDR Options—DID Number & Name
Secret dialing	Controls the display of secret dialing, when ARS dial above, is set to show ARS-modified numbers. If enabled, numbers dialed secretly will be shown as dots. If ARS dial is set to show the user-dialed numbers, secretly dialed numbers are always shown as dots in SMDR, regardless of this setting. 13.1 [11-1] Main—SMDR Options—◆ SMDR Options—Secret Dial
Date order	Controls the date format (MM-DD-YY, DD-MM-YY, YY-MM-DD, YY-DD-MM). 13.1 [11-1] Main—SMDR—◆ SMDR Format—Date Format
Received call	Controls whether the time of receiving an incoming CO line call is shown. 13.1 [11-1] Main—SMDR Options—◆ SMDR Options—Condition Code "RC/VR"
Answered call	Controls whether the time of answering an incoming CO line call is shown. 13.1 [11-1] Main—SMDR Options—◆ SMDR Options—Condition Code "AN/VA"
Room status	Controls whether room status changes are shown. 8.2 [6-2] Hotel—◆ SMDR for External Hotel Application 1—Room Status Control
Timed Reminder call	Controls whether Timed Reminder calls are shown (→ 17.1.4 Timed Reminder). 8.2 [6-2] Hotel—◆ SMDR for External Hotel Application 1—Timed Reminder (Wake-up Call)
Printing Message	Specifies the messages that can be selected from an extension. (→ 13.1.11 Printing Message) 8.2 [6-2] Hotel—◆ SMDR for External Hotel Application 2—Printing Message 1–8
Time format	Controls whether time is displayed in 12-hour or 24-hour format. 13.1 [11-1] Main—SMDR—◆ SMDR Format—Time Format (12H / 24H)

Conditions

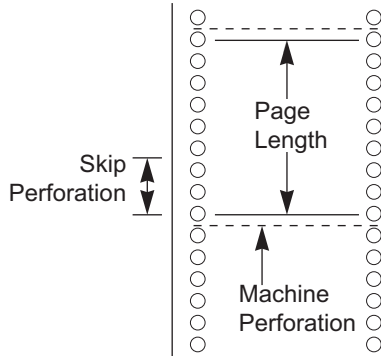
- SMDR Format

The following SMDR format parameters can be set through system programming in order to match the paper size being used by the printer:

- a. **Page Length:** determines the number of lines per page.
 - 13.1 [11-1] Main—SMDR—◆ SMDR Format—Page Length (Number of Lines)
 - [802] SMDR Page Length
- b. **Skip Perforation:** determines the number of lines to be skipped at the end of every page.
 - 13.1 [11-1] Main—SMDR—◆ SMDR Format—Blank Footer Length (Number of Lines)
 - [803] SMDR Skip Perforation

The page length should be at least four lines longer than the skip perforation length.

Explanation:



- SMDR data is not deleted even if the PBX is reset.
- If the PBX is reset during a conversation, the call will not be logged by SMDR.
- The following calls are regarded as two separated calls in the SMDR:
 - Calls before and after the flash/recall/EFA signal is manually sent during a conversation
 - CO-to-CO line calls by Call Transfer, FWD or DISA (each is logged as both an "incoming call" and an "outgoing call")
- The PBX waits for a preprogrammed time period after the end of dialing before starting the SMDR timer for outgoing CO line calls. When the PBX has sent out all dialed digits to the telephone company and this timer expires, the PBX begins measuring the duration of the call. A display proprietary telephone (PT) shows the elapsed time of the call. The starting time and the total duration of the call are logged by SMDR.
 - 4.4 [2-3] Timers & Counters—Dial / IRNA / Recall / Tone—◆ Dial—Analog CO Call Duration Start
 - [208] Call Duration Count Starting Time for LCOT
- **Serial Interface (RS-232C) Parameters**

The following communication parameters can be assigned for the Serial Interface (RS-232C port).

 - a. **New Line Code:** Select the code appropriate for the PC or printer. If the PC or printer automatically feeds lines with carriage return, select "CR." If not, select "CR+LF."
 - 13.1 [11-1] Main—RS-232C—◆ Communication—NL Code
 - [800] RS-232C Parameter—New Line Code
 - b. **Baud Rate:** Baud rate indicates the transmission speed of data from the PBX to the PC or printer.
 - 13.1 [11-1] Main—RS-232C—◆ Communication—Baud Rate
 - [800] RS-232C Parameter—Baud Rate
 - c. **Word Length:** Word length indicates how many bits compose each character.
 - 13.1 [11-1] Main—RS-232C—◆ Communication—Word Length
 - [800] RS-232C Parameter—Word Length
 - d. **Parity Bit:** Parity bit indicates what type of parity is used to detect errors in the string of bits composing a character. Make an appropriate selection depending on the requirements of the PC or printer.
 - 13.1 [11-1] Main—RS-232C—◆ Communication—Parity Bit
 - [800] RS-232C Parameter—Parity Bit
 - e. **Stop Bit Length:** Stop bit indicates the end of a bit string which composes a character. Select an appropriate value depending on the requirements of the PC or printer.

13.1 [11-1] Main—RS-232C—◆ Communication—Stop Bit [800] RS-232C Parameter—Stop Bit Length

- If a call is transferred to an ICD group using Automatic Transfer, the condition code "TR" will not be recorded on SMDR (→ 3.1.8 Call Transfer).
- **Host PBX Access Code**
The dialed number including the Host PBX Access code will be recorded on SMDR only if the modified number setting is selected in the ARS setting for SMDR.
- When a Host PBX Access code is assigned to a trunk group, calls to extensions of the host PBX are not recorded on SMDR.
- A Host PBX Access Code can be used to record only long distance calls on SMDR when a CO line port is connected directly to the telephone company (not a host PBX). This is allowed when the long distance code (e.g., "0") is assigned as the Host PBX Access code. All local calls (e.g., calls that do not require a "0" to be dialed first) are treated as extensions of the telephone company and do not get recorded on SMDR, because in this case this PBX recognizes the telephone company as the host PBX. Therefore, only long distance calls are recorded on SMDR.

Installation Manual References

KX-TDA50

2.10.1 Connection of Peripherals

KX-TDA100/KX-TDA200

2.11.1 Connection of Peripherals

KX-TDA600

2.3.2 EMEC Card (KX-TDA6105)

2.13.1 Connection of Peripherals

PC Programming Manual References

- 4.4 [2-3] Timers & Counters—Dial / IRNA / Recall / Tone—◆ Dial—Analog CO Call Duration Start
- 4.11 [2-7-1] Class of Service—COS Settings—CO & SMDR—◆ Outgoing CO Call Printout (SMDR)
- 8.2 [6-2] Hotel—Main—◆ SMDR for External Hotel Application 2—Printing Message 1–8
- 13.1 [11-1] Main
 - SMDR
 - SMDR Options
 - RS-232C—◆ Communication—Baud Rate
 - RS-232C—◆ Communication—NL Code
 - RS-232C—◆ Communication—Word Length
 - RS-232C—◆ Communication—Parity Bit
 - RS-232C—◆ Communication—Stop Bit

PT Programming Manual References

- [800] RS-232C Parameter—New Line Code
- [800] RS-232C Parameter—Baud Rate
- [800] RS-232C Parameter—Word Length
- [800] RS-232C Parameter—Parity Bit
- [800] RS-232C Parameter—Stop Bit Length
- [802] SMDR Page Length
- [803] SMDR Skip Perforation
- [804] SMDR Outgoing Call Printing
- [805] SMDR Incoming Call Printing