SAMSUNG DCS
Auto Attendant & ACD
User Guide

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Revision 2.1

1. Introduction

This document details the information required to record messages and to successfully operate the Automated Attendant (AA) and Uniform Call Distributor (ACD) features on the Samsung DCS.

The DCS AA and ACD enable incoming calls to be answered and processed without human intervention. With the AA callers are answered with a message prompting him/her to dial numbers to reach extensions or groups in the system or follow other options provided by the AA board. The ACD is used whenever it is expected that incoming calls will be greater than the people to answer them in peak periods. It prevents callers from receiving busy signals or lengthy delays before answering. Callers reaching a busy station group are held in a queue for an available operator.

The Automated Attendant and Automatic Call Distributor features require optional hardware. Please contact your Service Company for details.

2. Automated Attendant

2.1. Configuration

- The Automated Attendant hardware and software has provision for 64 messages of the following types:
    1. two minutes of up to 48 customer recorded messages (01-48) with battery-backup
    2. one minute of 16 pre-recorded system (ROM) messages (49-64)

- A single message can be created by combining up to 5 messages. This enables flexible and efficient use of AA memory when continuous playing of several messages is desired. (**Message Match**)
- To handle high traffic applications, up to five Automated Attendant cards can be installed. Depending on system size. However each additional card must have the same messages

2.2. System Messages

Message	Description
01-48	To be created by users using the AAREC key
49	"Thank you for calling, please dial your party's extension number."
50	"Invalid number, please try again."
51	"I'm sorry, there is no answer."
52	"I'm sorry, that station is busy."
53	"One moment please."
54	"Transferring."
55	"I'll transfer you."
56	"Good-bye."
57	"Thank you."
58	"Please hold for the operator."
59	"Please hold for assistance."
60	"Thank you, good-bye."
61	"I'm sorry, all stations are presently busy."
62	"I'm sorry, all stations are still busy."
63	"Please call back later."
64	"I'm sorry, not a valid selection."

The following messages can be programmed for AA operation or alternatively you may wish to use some of the pre-programmed messages in combination with your own.

DAY MESSAGE
This is the message that will be heard by the caller when the AA answers a call if the system is in DAY mode. This message has a default selection of ROM message #49 but it can be replaced with a customised message (01-48) or with any other ROM message (49-64).

NIGHT MESSAGE
This is the message that will be heard by the caller when the AA answers a call if the system is in NIGHT mode. This message has a default selection of NONE but it can be replaced with a customised message (01-48) or with any other ROM message (49-64).

ALTERNATE MESSAGE
This is the message that will be heard by the caller when the AA answers a call if this message has been selected by the AA administrator. This message has a default selection of NONE but it can be replaced with a customised message (01-48) or with any other ROM message (49-64).

INVALID MESSAGE
Determines what message will play if the caller dials invalid digits repeatedly until the retry counter expires. Invalid digits are digits not contained in the translation table for this plan. The invalid message will repeat for the value contained in the retry counter. This message has a default selection of ROM message #64 but it can be replaced with a customised message (01-48) or with any other ROM message (49-64).

NO ANSWER MESSAGE
Determines what message will play if the caller is recalled to the AA port because of a no answer. This message has a default selection of ROM message #51 but it can be replaced with a customised message (01-48) or with any other ROM message (49-64).

TRANSFER MESSAGE
Determines what message will play if the caller is transferred. This message has a default selection of ROM message #53 but it can be replaced with a customised message (01-48) or with any other ROM message (49-64).

BUSY MESSAGE
Determines what message will play if the caller selects a busy station. This message has a default selection of ROM message #52 but it can be replaced with a customised message (01-48) or with any other ROM message (49-64).

NO STATION MESSAGE
Determines what message will play if the caller dials an invalid extension (not installed). This message has a default selection of ROM message #50 but it can be replaced with a customised message (01-48) or with any other ROM message (49-64). This message will repeat for the value contained in the retry counter.

NO ACTION MESSAGE
Determines what message will play if the caller does not act. This message has a default selection of ROM message #59 but it can be replaced with a customised message (01-48) or with any other ROM message (49-64).

2.3. Programming the AA keys

To successfully record your own messages you will need to program an AAPLAY and an AAREC key on to the keyset you wish to use. If you do not know the passcode to use please see your System Administrator.

To create an "AAPLAY" and "AAREC" keys
You must first open system programming using the passcode you have been assigned. This must be done using an LCD 24B keyset. Should it become necessary to change this passcode, see your Service company.

- While your handset is on-hook, press **TRSF** and then dial **200**.
  The display shows [ENABLE CUS. PROG. PASSCODE].
- Dial the four digit passcode.
  The display shows [ENABLE CUS. PROG. - DISABLE].
- Dial 1 to enable.
  The display shows [ENABLE CUS. PROG - ENABLE].
- Press **TRSF**. The keyset returns to its idle condition.
- Now press **TRSF** and the three digit program code you want to access. Follow the instructions for that program.

NOTE: You must begin programming within 30 seconds. Once you are in programming mode, any delay of more than 30 seconds between key strokes will cause the system to automatically close programming.

To program the AAREC and AAPLAY keys on your keyset follow the procedure below:.

DIAL KEYPAD

COUNT →	1	2	3
DIAL 2	AAPLAY	BARGE	CALL
DIAL 3	DICT	DICT	FAUTO
DIAL 4	GPIK	HLDPK	IOG
DIAL 5	LCR	LCR	LCR
DIAL 6	MMPA	NEW	OHVA
DIAL 7	PAGE	REJECT	SG
DIAL 8	TG	UA	VDIAL

PROGRAM KEYS

UP & DOWN Used to scroll through options
KEYPAD Used to enter selections
SOFT KEYS Move cursor left and right
SPEAKER Used to store data and advance to next program
HOLD Used to clear previous entry

ACTION	**DISPLAY**
1. Press **TRSF 722** Display shows	[201] KEY PROG. 01 : CALL 1 →
2. Enter selected station number (eg., **205**) OR press **UP** or **DOWN** key to select station number and press RIGHT soft key to move cursor	[205] KEY PROG. 01 : CALL 1 →
3. Enter selected key number (eg., **18**) OR Press **UP** or **DOWN** key to select key number and press the RIGHT soft key to move the cursor	[201] KEY PROG. 18 : NONE → _
4. Press the number 2 dial pad key And press RIGHT soft key to move to return to step 3	[201] KEY PROG. 18 : NONE → AAPLAY
5. Enter the next key number (eg., **19**) OR Press **UP** or **DOWN** key to select key number and press the RIGHT soft key to move the cursor	[201] KEY PROG. 18 : AAPLAY→ _
5. Press the number 2 dial pad key and then Press **U**P key to select AAREC	[201] KEY PROG. 19 : NONE → AAREC

6. Press **TRSF** to store and exit

2.4. Message Recording

There are two ways to record messages. Messages can be recorded using the handset or a cassette tape connected to the BGM port.

A. With the Handset

1. Lift the handset. (Speakerphone use is not allowed.)
2. Press the "AAREC" button.
3. Enter the AA Record passcode.
4. Press the "HANDSET" soft button or dial '0'.
5. Dial the first port number of the AA board where messages are to be recorded.
6. Dial the message number to record (01 to 48).
7. Record the voice message.
8. When done, press "AAREC" or "ANS/RLS" button.
9. Replace the handset.

B. Via BGM port

With the messages in the cassette tape is being played as BGM,

1. Press the "AAREC" button.
2. Enter the AA Record passcode.
3. Press the "BGM" soft button or dial '1'.
4. Dial the first port number of the AA board where messages are to be recorded.
5. Dial the message number to record (01 to 48).
6. The message is recorded.
7. When done, press "AAREC" or "ANS/RLS" button.

C. More Than One Message

Several messages can be recorded continuously.
When one message is recorded, wait for a while (silence of 5 seconds) and begin the next message.
When all messages are recorded, exit by pressing "AAREC" or "ANS/RLS" button.

2.5. Message Playing

Recorded messages can be played.

1. Press the "AAPLAY" button.
2. Dial the first port number of the AA board where the desired message is recorded.
3. Dial the message number to play (01 to 64).
4. After the selected message is done, the next messages will be played.
5. To stop playing, press "AAPLAY" or "ANS/RLS" button.

2.6. AA Music on Hold

An AA message can be used for Music on Hold. In this mode the AA message will play continuously. Speak to your Service Company about how you can utilise this facility

2.7. Greeting Change

Different day and night greetings may be programmed. These change when the DCS system changes between day mode and night mode. Additionally, an alternate greeting may be recorded to indicate a holiday, an emergency or another temporary closure. From time to time, it may be necessary to manually change the active greeting from the current (day or night) to the alternate (holiday).

The AA allows the system administrator to call in and change the current greeting to day, night or alternate:

1. Call the Automated Attendant and listen to the greeting you wish to change.
2. While hearing the greeting, dial the passcode to change the greeting.
3. Dial '1' for the day greeting, '2' for the night greeting or '3' for the alternate greeting.
4. Hang up. The new greeting is set until the next scheduled change.

2.8. Tips

NOTE: In the following, *outside caller* refers to an incoming exchange line call and *extension* refers to an internal caller (station).

- A passcode is required for AA message recording for protection against unauthorised recording and change of messages. Please see your System Administrator for passcode details.
- After recording the last message, wait for a while (about 20% of recording time at least) before using the AA. During this period the AA detects the silent periods in the recording, compresses the messages and stores the voice data into memory.
- While recording several messages in a row, the message number on the LCD is not updated, because the message separation will take place later during the processing of the of the recording. During message recording, the remaining time left for recording is not updated either. However, the message number and time are updated when the messages are played back.
- When recording multiple messages in a single session it may be necessary to break the recording of messages into groups to ensure the full memory is available. Recording in groups ensures that the 5 second silent periods between messages are recovered before recording the next group of messages.
- During the playing of the messages, a confirmation tone follows each message and the message number is displayed on the LCD.
- **Careful consideration should be taken in recording and erasing messages, because changing a message in the middle will make the following ones unusable.**
- For more simultaneous service channels, more than one AA board can be installed in the system. The messages, however, in each AA board should have the same contents. ***The total recording time is still 2 minutes*.**

- You may link together messages that also have linked messages however the maximum number of individual messages is still 5.
- When selecting the alternate or night message you must ensure that the outside lines are programmed to ring the AA group in NIGHT mode.
- When you wish to use the last port on the AA card as the Music on Hold source and you are likely to change this message regularly it should be programmed in one of the late message numbers. Eg. 48
- When a call first arrives at the AA, the DAY or NIGHT MESSAGE is played after an ANSWER DELAY.
- If the DAY or NIGHT MESSAGE is empty (ie. if no message has been recorded to the message number assigned to the DAY or NIGHT MESSAGE), then the call is processed as if the DAY or NIGHT MESSAGE has been played.
- After the DAY or NIGHT MESSAGE has played, the call is processed according to the Translation Table in the AA Plan Table:
    - if NONE, the call is terminated.
    - if not NONE, then the AA NO ACT TIME is invoked.
    - if the associated Translation Table is empty, the call is transferred to the NO ACTION DESTINATION.
- When AA NO ACT TIME expires for a call (either internal or outside), NO ACTION MESSAGE is played
- If an extension hangs up while transferring a call to the AA port or group, the AA plays the message again to the party being transferred.
- If the outside caller hangs up while hearing an announcement (and if this is detected by the system), then AA stops the announcement and returns to idle.
- If an extension presses the SPEAKER, or ANS/RLS key while hearing an announcement, then AA stops the announcement and returns to idle. If any other key is pressed, it is ignored.

- If the caller dials some digits during the introductory message, then AA checks the digits and after confirming they are valid digits, the call is processed in accordance with system programming. ie:
    1. if a station number is dialled, then the TRANSFER MESSAGE is played and the call is transferred to the station.
    2. if a station group number is dialled, then the TRANSFER MESSAGE is played and the call is transferred to the group.
    3. if the Greeting Change, digits are dialled, then depending on the current mode, the DAY or NIGHT MESSAGE is played and AA enters the Change Greeting state.
        - If the following digit is a 1, then AA plays the DAY MESSAGE and hangs up the call and the system is set to DAY mode.
        - If the following digit is a 2, then AA plays the NIGHT MESSAGE and hangs up the call and the system is set to NIGHT mode.
        - If the following digit is a 3, then AA plays the ALTERNATE MESSAGE and hangs up the call and the system is set to NIGHT mode.
        - If no further digits are received within a pre-programmed time, then the call is terminated.

    4. if others, then NO STATION MESSAGE is played and AA enters retry state.

- When an outside call is transferred by the AA to a busy extension, the BUSY MESSAGE is played and the call is handled according to the BUSY DESTINATION programmed and its status:
  1. if it is idle, the call is transferred to the BUSY DESTINATION.
  2. if it is busy, the call is camped-on to the BUSY DESTINATION.
  3. if NONE, the call is terminated.
  4. when recalled after camp-on, then the call is transferred to the operator.
  5. when a recall at the BUSY DESTINATION is not answered, then the call is transferred to the operator.

- When an internal call is transferred by the AA to a busy extension, the BUSY MESSAGE is played and the call is handled according to the BUSY DESTINATION programmed and its status:
  1. if it is idle, the call is transferred to the BUSY DESTINATION.
  2. if it is busy, the call is camped-on to the BUSY DESTINATION.
  3. if NONE, the call is terminated.
  4. when recalled after camp-on, then the call is terminated.
  5. when a recall at the BUSY DESTINATION is not answered, the call is terminated.

- When an outside call is transferred to an extension by the AA and if the call is not answered, the NO ANSWER MESSAGE is played and the call is handled according to the NO ANSWER DESTINATION programmed and its status:
  1. if it is idle, the call is transferred to the NO ANSWER DESTINATION.
  2. if it is busy, the call is camped-on to the NO ANSWER DESTINATION.
  3. if NONE, the call is terminated.
  4. when recalled after camp-on, the call is transferred to the operator.
  5. when a recall is not answered at the NO ANSWER DESTINATION, the call is transferred to the operator.

- When an internal call is transferred to an extension by the AA and if the call is not answered, the NO ANSWER MESSAGE is played and the call is handled according to the NO ANSWER DESTINATION programmed and its status:
  1. if it is idle, the call is transferred to the NO ANSWER DESTINATION.
  2. if it is busy, the call is camped-on to the NO ANSWER DESTINATION.
  3. if NONE, the call is terminated.
  4. when recalled after camp-on, the call is terminated.
  5. when a recall is not answered at the NO ANSWER DESTINATION, the call is terminated.

- When an outside call is transferred to an extension by the AA and it is not available (eg. DND, LOCK), the INVALID MESSAGE is played and the call is handled according to the INVALID DESTINATION programmed and its status:
  1. if it is idle, the call is transferred to INVALID DESTINATION.
  2. if it is busy, the call is transferred to the operator.
  3. if NONE, the call is terminated.
  4. when a recall is not answered at the INVALID DESTINATION, the call is transferred to the operator.

- When an internal call is transferred to an extension by AA and it is not available (eg. DND, LOCK), the INVALID MESSAGE is played and the call is handled according to the INVALID DESTINATION programmed and its status:

1. if it is idle, the call is transferred to INVALID DESTINATION.
2. if it is busy, the call is terminated.
3. if NONE, the call is terminated.
4. when a recall is not answered at the INVALID DESTINATION, the call is terminated.

- When an outside call is transferred to NO ACTION DESTINATION by the AA the call is handled according to the NO ACTION DESTINATION programmed and its status:
    1. if it is idle, the call is transferred to NO ACTION DESTINATION.
    2. if it is busy, the call is transferred to the operator.
    3. if NONE, the call is terminated.
    4. when a recall is not answered at the NO ACTION DESTINATION, the call is transferred to the operator.

- When an internal call is transferred to NO ACTION DESTINATION by AA and according to the NO ACTION DESTINATION:
    1. if it is idle, the call is transferred to NO ACTION DESTINATION.
    2. if it is busy, the call is terminated.
    3. if NONE, the call is terminated.
    4. when no answer recalled, the call is terminated.

- When invalid digits are received for a call (either internal or outside), then INVALID MESSAGE is played and the call is processed according to the retry count:
    1. if it is less than the RETRY COUNT, NO STATION MESSAGE is played.
    2. if it equal the RETRY COUNT, the call is transferred to the INVALID DESTINATION.

- When an outside call is transferred to INVALID DESTINATION, the call is processed according to the INVALID DESTINATION programmed and its status:
    1. if it is idle, the call is transferred to INVALID DESTINATION.
    2. if it is busy, the call is transferred to the operator.
    3. if NONE, the call is terminated.
    4. when a recall is not answered at the INVALID DESTINATION, the call is transferred to the operator.

- When an internal call is transferred to INVALID DESTINATION, the call is processed according to the INVALID DESTINATION programmed and its status:
    1. if it is idle, the call is transferred to INVALID DESTINATION.
    2. if it is busy, the call is terminated.
    3. if NONE, the call is terminated.
    4. when a recall is not answered at the INVALID DESTINATION, the call is terminated.

3. Automatic Call Distributor (ACD)

3.1. Configuration

- When callers ring a busy ACD group they are placed in a queue and receive announcements provided by the Auto Attendant board.
- After a programmable automatic logout time, the system automatically removes a station from the group if a call is placed to an unattended station, thus preventing further unanswered calls.
- A wrap-up timer prevents calls to a station for a programmable period of time to allow the agent to complete paperwork before receiving the next ACD call.
- The ACD group option allows callers in the queue to be temporarily diverted to a customer-provided announcement device and then placed back in the queue.
- ACD supervisor positions using a display keyset can monitor the number of calls in queue, the time that the oldest caller has been waiting, the total number of calls received for the current day and the average time a caller waits to be answered.
- The ACD supervisor can also monitor the number of agents in a group and how many agents are currently logged in. Each station's status can be reviewed for the number of calls answered and the average call length of the current day.
- Multiple supervisors can be assigned to each group or one station can be given supervisor status for multiple groups. The group supervisor (using a display keyset) can add and delete agents in real time from the group to handle the workload.

3.2. Message Recording

The procedure for programming the messages on the AA card for ACD operation are detailed in sections 2.3 and 2.4.

3.3. ACD Supervisor Operation

- To review ACD group statistics the supervisor must follow the following procedure:

a. Call Statistics

ACTION	**DISPLAY**
1. Press Supervisor key Display shows main supervisor menu	XXX: *GROUP NAME* CALL ADMN AGENT
2. Press **CALL** soft key (Left soft key)	XXX calls in queue now
3. Press **VOL** Up and Down keys to scroll call statistics (eg. **-** key)	longest queue time is 00:00
	XXXX calls received today

	average time in queue is 00:00
	XXX times all busy today
	average ring time is 00:00

B. Agent Status and Statistics

ACTION	**DISPLAY**
1. Press Supervisor key Display shows main supervisor menu	XXX: *GROUP NAME* CALL ADMN AGENT
2. Press **AGENT** soft key (Right soft key)	XX available XX logged in
3. Press **VOL** Up and Down keys to scroll through Agents	201:*Station Name* status: in OUT
4. To change the current status of the Agent press the Right soft key	201:*Station Name* status: out IN
5. To scroll through Agent statistics press the **SCROLL** key	201: answered XXX calls today
	201: average call time 00:00
	201: average ring time 00:00

C: Print Call and Agent Statistics

ACTION	DISPLAY
1. Press Supervisor key Display shows main supervisor menu	XXX: *GROUP NAME* CALL ADMN AGENT
2. Press **ADMN** soft key	XXX: *GROUP NAME* PRINT CLEAR
3. Press **PRINT** soft key	PRINT GROUP DATA MANUAL AUTO
4. Press **MANUAL** soft key (go to step 6 to set a time for automatic printing)	PRINT DATA NOW YES NO
5. Press **YES** soft key to print	PRINT DATA NOW PRINTING!
	XXX: *GROUP NAME* CALL ADMN AGENT
6. Press **AUTO** to set an automatic print time or to turn off automatic print facility or to view current setting	AUTOMATIC PRINT ON VIEW OFF
7. Press **ON** to program an automatic print time. Enter time in 24 hour mode (eg. 1300)	ENTER PRINT TIME HHMM:
OR	XXX: *GROUP NAME* CALL ADMN AGENT
8. Press **VIEW** to view automatic printing time and status	AUTO PRINT TIME 13:00 ON
OR	
9. Press **OFF** to turn off automatic printing	

D. Clear Call and Agent Statistics

ACTION	DISPLAY
1. Press Supervisor key Display shows main supervisor menu	XXX: *GROUP NAME* CALL ADMN AGENT
2. Press **ADMN** soft key	XXX: *GROUP NAME* PRINT CLEAR
3. Press **CLEAR** soft key	PRINT GROUP DATA

	MANUAL AUTO
4. Press **MANUAL** soft key (go to step 6 to set a time for automatic clearing)	PRINT DATA NOW YES NO
5. Press **YES** soft key to clear	CLEAR DATA NOW CLEARING!
	XXX: *GROUP NAME* CALL ADMN AGENT
6. Press **AUTO** to set an automatic clear time or to turn off automatic clear facility or to view current setting	AUTOMATIC CLEAR ON VIEW OFF
7. Press **ON** to program an automatic clear time. Enter time in 24 hour mode(eg. 1300)	ENTER CLEAR TIME HHMM:
OR	XXX: *GROUP NAME* CALL ADMN AGENT
8. Press **VIEW** to view automatic clearing time and status	AUTO CLEAR TIME 13:00 ON
OR	
9. Press **OFF** to turn off automatic clearing	

3.4. Tips

- To establish a ACD supervisor it is as simple as programming a Supervisor (SP) key and group number on the designated supervisor keyset. See your System Administrator.
- When all agents are busy an outside call is transferred to the AA card, if installed, the FIRST MESSAGE Is played according to the message number programmed for the first message. The default message is 61, but it can be replaced with a customised message (01-48). Alternatively the caller is directed to the Music on Hold source installed.
- If a caller is held in the queue longer than the ACD recall timer the caller will be played the SECOND MESSAGE, if the AA card is installed. The default message is 62, but it can be replaced with a customised message (01-48).

- Supervisor alarms can be programmed to provide both a visual and/or an audible alarm at the supervisor Keyset when the number of waiting calls exceeds the number programmed. The counter for the number of waiting calls can be programmed separately for the visual and audible alarm to enable escalating alarms as the number of calls increases, if required. The visual alarm consists of a flashing LED in supervisor key and the following message on the LCD .eg.

ALARM SUPERVISOR 510: RING COUNTS	OR	ALARM SUPERVISOR 510: QUEUE TIME

See your System Administrator or speak to your Service Company for further information