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Table of Contents

SECTION 1	INTRODUCTION.....	2
SECTION 2	SMART CTR2000 PHYSICAL DESCRIPTION.....	2
SECTION 3	INSTALLATION	3
SECTION 4	OPERATION	3
SECTION 5	SYSTEM STATUS, PROGRAMMING & TEST MODES	4
APPENDIX A	ILLUSTRATIONS FOR SETTING UP CTR2000.....	14

SMART products are designed to deliver unsurpassed quality in workmanship and performance. The following information gives detailed instructions on the installation and operation of the SMART CTR2000. We strongly encourage new owners of the CTR2000 to thoroughly read this entire manual before placing their new SMART product into service. This will ensure that the CTR2000 will be operated properly to give the superior performance that it was designed to deliver.

For service or installation assistance, please call our
 Technical Support Department between the hours of
 8 a.m-5 p.m. E.S.T., Mon.-Fri.
 1-800-45-SMART

LIMITED WARRANTY: SMART products and accessories are warranted against malfunction or failure due to defects in workmanship or materials for a period of one year from the date of shipment. If a problem occurs during the warranty period, the unit will be repaired, or replaced at our option, without charge for materials or labor. If air freight is requested by the dealer, the difference between air and surface charges will be billed to the dealer. This limited warranty does not cover products that have been abused, altered, modified, or operated in other than specified conditions. Prior factory approval is required on all returns. Returned equipment or defective parts must be shipped freight prepaid to us by the dealer or customer.

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Installation and Service Manual

CTR2000 Multi-line Concentrator

NOTE: This equipment has been tested and found to comply with limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when this equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his/her own expense.

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Printed in the U.S.A.

1. Introduction

The SMART CTR2000 is a Multi Line Telephone Answering System designed to operate with a variety of SMART Digital Audio Announcement Systems. SMART CTR2000 when combined with a digital announcer services up to 8 incoming telephone lines. The SMART CTR2000 contains the following features:

- Per Line Call Counters (9999 maximum)
- Totalized Call Counts (999999 maximum)
- Disconnect – CPC and call duration (01 to 59)
- Individual Line Status
- Timed Operation Start Time / Stop Time
- Separate Start and Stop time for each day of the week

Billing Delay for 800/900 Call Counts

Individual Line Enable/Disable Configuration

Each Line may be configured as On, Off or Timed separately for each day of the week

Time of Day Clock

Programmable Number of Rings (1,2,4,8)

Expansion beyond 8 lines

2 Port Line Cards

Free Run Announcers or Controllable Announcers

2. SMART CTR2000 Physical Description

2.1 Front Panel

SYSTEM DATA REPORTING

The 2 Line by 20 character LCD display.

PROGRAMMING ENTRY

The Keypad is a 20 button keypad arranged in a 4 by 5 matrix. Keys defined as follows;

Key: Definition:

- I. Function Key 1 Context dependent key used in conjunction with the LCD.
- II. Function Key 2 Context dependent key used in conjunction with the LCD.
- III. Function Key 3 Context dependent key used in conjunction with the LCD.
- IV. Function Key 4 Context dependent key used in conjunction with the LCD.
- 0-9 Numeric Entry Keys
- * Special Function Key
- # Special Function Key

MODE Special Function Key to Enter the Program, Status or Test Mode

CLR General Purpose Key which is used to exit or cancel selected functions

2.2 Side Panel Controls and Connections

12 VDC

To connect the external DC power pack.

POWER

This switch enables external power to the system.

AUDIO IN

This connector provides input from the Digital Announcer.

LCD CONTRAST

Adjusts the contrast of the LCD display to compensate for lighting variations.

CONTROL OUT

Interface to control the play operation of the Digital Announcer.

CONTROL IN

Expansion port for connecting more than one SMART CTR2000 to a single Digital Announcer.

LINE 1-8

Modular telephone connector for connecting telephone lines to the SMART CTR2000.

3. Installation *(See illustrations in Appendix A)*

Locate the SMART CTR2000 within 6 feet of a 110 VAC outlet. The SMART CTR2000 can be either wall or desktop mounted. When locating, be sure to leave clearance room on the left side for connection and adjustments.

Connect the DC power pack supplied with the system to the 12 VDC power connection on the left side of the unit and plug the power pack into a 110 VAC outlet.

Connect a modular telephone cable for each tele-

phone line from the telephone line terminating block to LINE 1 – 8.

3.1 Digital Announcer Connection

The SMART CTR2000 operates in two separate modes depending upon the specific type of digital announcer attached. Control mode allows the SMART CTR2000 to start and stop the digital announcer for the purpose of providing the first caller the convenience of hearing the message play from the beginning, while additional callers enter the message in play. Control mode requires a digital announcer capable of external start/stop operation.

Free run mode allows the SMART CTR2000 to operate with any digital announcer. In free run mode, all callers enter the message in play.

3.2 Audio Level Adjustment

To adjust the message audio level, record the message into the digital announcer following the instructions for the announcer used. Connect an audio cable from the audio output of the digital announcer to the Audio In connector of the SMART CTR2000. Place a call to the SMART CTR2000, while listening to the announcement, adjust the audio out level from the digital announcer. In compliance with FCC regulations, the SMART CTR2000 limits amount of audio signal level present to the telephone line.

4. Operation

4.1 Controllable Announcers

The first call answered by the unit starts the Digital Announcer. As other calls are answered, they are connected to the announcement in progress. As long as the caller remains on the line, the announcement will continue to play until the maximum call hold time has been reached. As each caller hangs up, the line become immediately available to answer another call. When all of the lines return to the idle state, the Announcer is stopped.

4.2 Other Announcers

When operating in a free run, continuous play mode. Each call answered is connected to the announcement in progress. As long as the caller remains on the line, the announcement will continue to play until the maximum call hold time has been reached. As each caller hangs up, the line become immediately available to answer another call. When all of the lines

return to the idle state, the Announcer continues to run.

4.3 Multiple SMART CTR2000's

A single SMART CTR2000 supports up to 8 telephone lines. For applications requiring more than 8 lines, additional SMART CTR2000 systems can be added. A special cable allows the audio and control signals from the first SMART CTR2000 to be extended to the second SMART CTR2000.

5. System Status, Programming and Test Modes

The SMART CTR2000 may be programmed to fit the user's application needs. Programmable functions include; setting time and date, call hold time, number of rings before answer, call count delay and timed operation. All programming and configuration parameters are stored in non volatile memory for protection against power outages. Once programmed, the system needs no further attention unless a programming change is desired.

To access the programming functions, press "MODE". The user is presented with a "Mode Select Menu" which presents options for accessing "Status", "Prog" or "Test" modes. The user selects a specific mode by pressing the corresponding Function Key (I,II,III,IV). The Function keys are used as "soft" keys where the action associated with those keys changes depending upon the specific text presented on line 2 of the LCD Display.

When presenting a menu where the user selects a specific Function key, Line 2 of the LCD is sectioned into 4 blocks where the first block of 5 characters is associated with Function key "I", the next block with Function key "II", etc.

MODE SELECT MENU

The Mode Select Menu provides access to one of the

Function Key	Action
I	Status Mode
II	
III	Program Mode
IV	Test Mode

three SMART CTR2000 functional modes;

Status Mode:

Display information concerning the current line condition, call counts and enabling or disable individual telephone lines.

Prog Mode:

Setting system operating parameters, number of rings, billing delay time, setting Time and Date, call hold time and timed operation.

Test Mode:

System self tests for diagnostic purposes.

5.1 Status Mode Menu

Status Mode provides access to the following functions;

Function Key	Action
I	Line State
II	Line Configuration
III	Call Count
IV	Clear (exit)

Line State – Current status of each individual telephone line

Line Conf – Line Configuration per day (On, Off, Timed)

Call Counts – Total and individual telephone line call counts

5.1.1 Line State Display

The display indicates the current state of each of the 8 telephone lines.

Line State Definition

- I Idle – On Hook ready to answer calls
- R Ring – Line Ringing
- A Answer – Answering Call
- D Billing Delay – Waits 1 or 16 seconds before counting call

- P Playing – Actively playing message to caller
- H Hang up – Call complete hanging up line
- O Off Line – Line Answer Disabled
- T Timed – Timed Operation Off period
- Line Card Missing

5.1.2 Line Configuration Display

The Line Configuration Display indicates whether or not a telephone line is enabled to answer calls. An "I" indicates that the telephone line is enabled, a "O" indicates that the telephone line is disabled, a "T" indicates that the telephone line is operating under Timed Operation and "-" indicates that the line card is absent. The Line Configuration Display first shows Monday's configuration, to see Tuesday's configuration press "I", etc. Press "Clr" at any time to stop reviewing the Line Configurations.

Mon = 1 2 3 4 5 6 7 8
 (Tue) T I I T T O - -

Function Key	Action
I	Next Day
II	
III	
IV	Exit Line Configuration Review

To Exit press "CLR" or automatically after 15 seconds

5.1.3 Call Count Menu

The call count menu provides access to view the total number of calls, the number of calls per telephone line or to reset the call counters.

Function Key	Action
I	Total call count – all lines
II	Individual line call count
III	RESET call count
IV	Exit menu

To exit press "CLR" or automatically after 15 seconds

5.1.3.1 Total Call Count Display

Totalizes the number of calls received on each telephone line.

Total Calls = 999999
 Press (Clr)

To Exit press "CLR"

5.1.3.2 Per Line Call Count Menu

The per line call count menu provides access to display the number of calls each telephone line has received. Due to limitations in the amount of information which can be presented on the LCD display, the user must choose to view either lines 1 – 4 or lines 5 – 8.

Function Key	Action
I	Display call counts 1 – 4
II	Display call counts 1 – 4
III	Display call counts 5 – 8
IV	Display call counts 5 – 8

To Exit press "CLR" or automatically after 15 seconds

5.1.3.2.1 Lines 1 – 4 Call Counts

Displays total number of calls received on lines 1 – 4.

To exit press "CLR"

5.1.3.2.2 Lines 5 – 8 Call Counts

Displays the number of call received on lines 5 – 8.

To exit press "CLR"

5.1.3.3 Reset Call Count Menu

The reset call count menu provides the user a confirmation for reset the call counters. Clearing the call counters resets the call counters for each individual line.

Function Key	Action
I	Yes – Clears count ALL lines
II	
III	
IV	No – Exit no change in call counts

To Exit press "CLR" or automatically after 15 seconds

5.2 Programming Mode Menu

The Programming Mode provides access to setting the time and date and system configuration parameters.

Function Key	Action
I	Set time and date
II	Set time and date
III	
IV	Change system configuration

To Exit press "CLR" or automatically after 15 seconds

5.2.1 Set Time and Date – Enter Month (tens digit)

Entering the month, the system checks that the month entered is valid between 01 and 12. The tens digit may only be a "0" or a "1".

Enter Month?
01/05/95 09:30:32 AM

Valid Keys (0,1)

Clr Advance to Day without making change

To Exit – Automatically after 15 seconds

5.2.1.1 Set Time and Date – Enter Month (units digit)

Entering the month, the system checks that the month entered is valid between 01 and 12. If the tens digit is a "0" then the units digit may be (1 – 9), if the tens

digit is a "1" then the units digit may be (0 – 2).

Enter Month?
01/05/95 09:30:32 AM

Valid Keys (0 – 9)

Clr – Advance to Day without making change

To Exit – Automatically after 15 seconds

5.2.1.2 Set Time and Date – Enter Day (tens digit)

Entering the day, the system checks that the day entered is valid between 01 and 31. The tens digit must be between "0 – 3".

Enter Day?
01/05/95 09:30:32 AM

Valid Keys (0-3)

Clr – Advance to Year without making change

To Exit – Automatically after 15 seconds

5.2.1.3 Set Time and Date – Enter Day (units digit)

Entering the day, the system checks that the day entered is valid between 01 and 31.

Enter Day?
01/05/95 09:30:32 AM

Valid Keys (0 – 9)

Clr – Advance to Year without making change

To Exit – Automatically after 15 seconds

5.2.1.4 Set Time and Date – Enter Year (tens digit)

Enter Year?
01/05/95 09:30:32 AM

Valid Keys (0 – 9)

Clr – Advance to Hour without making change

To Exit – Automatically after 15 seconds

5.2.1.5 Set Time and Date – Enter Year (units digit)

Enter Year?
01/05/95 5 09:30:32 AM

Valid Keys (0-9)

Clr – Advance to Hour without making change

To Exit – Automatically after 15 seconds

5.2.1.6 Set Time and Date – Enter Hour (tens digit)

Entering the hour, the system checks that the hour entered is valid between 00 and 12. The tens digit may only be a "0" or a "1".

Enter Hour?
01/05/95 09:30:32 AM

Valid Keys (0 – 1)

Clr – Advance to Minute without making change

To Exit – Automatically after 15 seconds

5.2.1.7 Set Time and Date – Enter Hour (units digit)

Entering the hour, the system checks that the hour entered is valid between 00 and 12.

Enter Hour?
01/05/95 09:9:30:32 AM

Valid Keys (0 – 9)

Clr – Advance to Minute without making change

To Exit – Automatically after 15 seconds

5.2.1.8 Set Time and Date – Enter AM or PM

After the hour is entered, the user is asked to select

Function Key	Action
I	Selects AM
II	
III	
IV	Selects PM

either AM or PM.

To Exit – Press "CLR" or automatically after 15 seconds

5.2.1.9 Set Time and Date – Enter Minutes (tens digit)

Entering the minutes, the system checks that the minutes entered is valid between 00 and 59. The tens digit may be between "0-5".

Enter Minutes?
01/05/95 09:30:32 AM

Valid Keys (0 – 5)

Clr – Advance to Second without making change

To Exit – Automatically after 15 seconds

5.2.1.10 Set Time and Date – Enter Minutes (units digit)

Entering the minutes, the system checks that the minutes entered is valid between 00 and 59.

Enter Minutes?
01/05/95 09:30:0:32 AM

Valid Keys (0 – 9)

Clr – Advance to Second without making change

To Exit – Automatically after 15 seconds

5.2.1.11 Set Time and Date – Enter Seconds (tens digit)

Entering the seconds, the system checks that the seconds entered is valid between 00 and 59. The tens digit may be between "0-5".

Enter Seconds?
01/05/95 09:30:32 AM

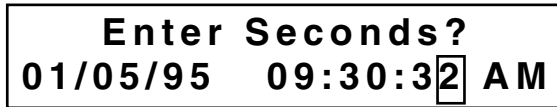
Valid Keys (0-5)

Clr – Advance to Day of Week without making change

To Exit – Automatically after 15 seconds

5.2.1.12 Set Time and Date – Enter Seconds (units digit)

Entering the seconds, the system checks that the seconds entered is valid between 00 and 59.



Valid Keys (0 9)

Clr – Advance to Day of Week without making change

To Exit – Automatically after 15 seconds

5.2.1.13 Set Day of Week

While the system contains a clock calendar, it needs to be informed of the current day of week when programming the Time and Date.

Function Key	Action
I	Accepts the displayed Day of Week
II	
III	
IV	Advances to the next Day of Week

Valid Keys ()

To Exit – Automatically after 15 seconds

5.2.2 System Configuration Change Menu

The configuration change menu provides access for modifying; Call Hold Time, Number of Rings, Billing

Function Key	Action
I	Enter configuration change mode
II	
III	
IV	Exit configuration change mode

Delay and Timed Operation. Prior to entering the change configuration mode, the user is asked to confirm.

To Exit – Press "CLR" or automatically after 15 seconds.

5.2.2.1 Call Hold Time Menu

Call Hold Time is the maximum amount of time that a caller is allowed to remain on the line before the system will terminate the call. The call hold time should be selected to allow the caller the opportunity to hear the complete message.

Function Key	Action
I	Accepts current hold time
II	
III	
IV	To change hold time

To Exit – Press "CLR" or automatically after 15 seconds

5.2.2.1.1 Change Call Hold Time – Enter Minutes (tens digit)

Entering the minutes, the system checks that the minutes entered is valid between 00 and 59. The tens digit may be between "0 – 5".

Valid Keys (0 – 5)

To Exit – Press "CLR" or automatically after 15 seconds

5.2.2.1.2 Change Call Hold Time – Enter Minutes (units digit)

Entering the minutes, the system checks that the minutes entered is valid between 00 and 59.

Valid Keys (0 – 9)

To Exit – Press "CLR" or automatically after 15 seconds

5.2.2.2 Set Number of Rings Menu

The set number of rings menu allows the user to select the number of rings that will occur prior to the system answering the telephone call.

Function Key	Action
I	Number rings before answering =1
II	Number rings before answering =2
III	Number rings before answering =4
IV	Number rings before answering =8

To Exit – Press "CLR" or automatically after 15 seconds

5.2.2.3 Billing Delay Time Selection Menu

Billing delay is useful for 800 and 900 type applications where the telephone call is paid for by either the caller or the user. Billing delay ensures that the call is not counted unless the length of the call exceeds the delay period (1 second or 16 seconds).

Function Key	Action
I	Sets billing delay to 1 second
II	
III	
IV	Sets billing delay to 16 seconds

To Exit – Press "CLR" or automatically after 15 seconds

5.2.2.4 Timed Operation Menu

Under timed operation, the system will only answer calls after the start time and until the stop time for the specified Day of Week. Call received during the "Timed" period receive a ring no answer. Start times and stop times may be set to any value from start in the morning, stop in the evening to start in the evening, stop in the morning. The start and stop times should then be reviewed to ensure that they are the desired hours of operation.

Function Key	Action
I	Advances to timed operation programming
II	
III	
IV	Skips timed operation without making changes

To Exit – Press "CLR" or automatically after 15 seconds

5.2.2.5 Timed Programming – Everyday

Enables the entry of Start and Stop time which will be applied to every day of the week.

Function Key	Action
I	Programs the same start & stop times for each day
II	
III	
IV	Advances to the next programming selection

To Exit – Press "CLR" or automatically after 15 seconds

5.2.2.6 Timed Programming – Monday through Friday

Enables the entry of Start and Stop time which will be applied to weekdays (Monday – Friday).

Function Key	Action
I	Programs the same start & stop times for weekdays
II	
III	
IV	Advances to the next programming selection

To Exit – Press "CLR" or automatically after 15 seconds

5.2.2.7 Timed Programming – Saturday and Sunday

Enables the entry of Start and Stop time which will be applied to weekends (Saturday and Sunday).

Function Key	Action
I	Programs the same start & stop times for weekends
II	
III	
IV	Advances to the next programming selection

To Exit – Press "CLR" or automatically after 15 seconds

5.2.2.8 Timed Programming – Individual Days

Enables the entry of Start and Stop time which will be applied to each individual day of the week.

Function Key	Action
I	Programs the same start & stop times for each day
II	
III	
IV	Advances to the next programming selection

To Exit – Press "CLR" or automatically after 15 seconds

5.2.2.9 Time to Start Answering Calls

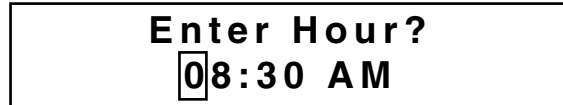
The currently programmed time to begin answering calls is shown. To change that time, Press "IV" (No), if no change is desired, Press "I" (Yes).

Function Key	Action
I	Accepts answer start time
II	
III	
IV	To change answer start time

To Exit – Press "CLR" or automatically after 15 seconds

5.2.2.9.1 Change Answer Start Time – Enter Hour (tens digit)

Entering the hour, the system checks that the hour entered is valid between 00 and 12. The tens digit may only be a "0" or a "1".

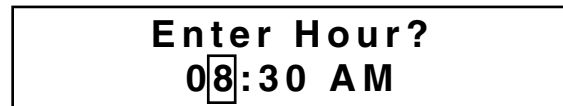


Valid Keys (0 – 1)

To Exit – Press "CLR" or automatically after 15 seconds

5.2.2.9.2 Change Answer Start Time – Enter Hour (units digit)

Entering the hour, the system checks that the hour entered is valid between 00 and 12.



Valid Keys (0 9)

To Exit – Press "CLR" or automatically after 15 seconds

5.2.2.9.3 Change Answer Start Time – Enter AM or PM

After the hour is entered, the user is asked to select either AM or PM.

Function Key	Action
I	Selects AM
II	
III	
IV	Selects PM

To Exit – Press "CLR" or automatically after 15 seconds

5.2.2.9.4 Change Answer Start Time – Enter Minutes (tens digit)

Entering the minutes, the system checks that the minutes entered is valid between 00, 15, 30, and 45. The CTR2000 will not accept any other time except those listed above.

Enter Minutes?
08:30 AM

Valid Keys (0 – 5)

To Exit – Press "CLR" or automatically after 15 seconds

5.2.2.9.5 Change Answer Start Time – Enter Minutes (units digit)

Entering the minutes, the system checks that the minutes entered is valid between 00, 15, 30 and 45.

Enter Minutes?
08:30 AM

Valid Keys (0 – 9)

To Exit – Press "CLR" or automatically after 15 seconds

5.2.2.10 Time to Stop Answering Calls

The current time to stop answering calls is shown. To change that time, Press "IV" (No), if no change is desired, Press "I" (Yes).

Function Key	Action
I	Accepts answer stop time
II	
III	
IV	To change answer stop time

To Exit – Press "CLR" or automatically after 15 seconds

5.2.2.10.1 Change Answer Stop Time – Enter Hour (tens digit)

Entering the hour, the system checks that the hour entered is valid between 00 and 12. The tens digit

may only be a "0" or a "1".

Enter Hour?
08:30 AM

Valid Keys (0 – 1)

To Exit – Press "CLR" or automatically after 15 seconds

5.2.2.10.2 Change Answer Stop Time – Enter Hour (units digit)

Entering the hour, the system checks that the hour entered is valid between 00 and 12.

Enter Hour?
08:30 AM

Valid Keys (0 – 9)

To Exit – Press "CLR" or automatically after 15 seconds

5.2.2.10.3 Change Answer Stop Time – Enter AM or PM

After the hour is entered, the user is asked to select either AM or PM.

Function Key	Action
I	Selects AM
II	
III	
IV	Selects PM

To Exit – Press "CLR" or automatically after 15 seconds

5.2.2.10.4 Change Answer Stop Time – Enter Minutes (tens digit)

Entering the minutes, the system checks that the minutes entered is valid between 00 and 59. The tens digit may be between "0 5".

Enter Minutes?
07:30 PM

Valid Keys (0 – 5)

To Exit – Press "CLR" or automatically after 15 seconds

5.2.2.10.5 Change Answer Stop Time – Enter Minutes (units digit)

Entering the minutes, the system checks that the minutes entered is valid between 00 and 59.

<p>Enter Minutes? 07:30 PM</p>

Valid Keys (0 – 9)

To Exit – Press "CLR" or automatically after 15 seconds

5.2.2.11 Change Line Configuration

Each individual line may be configured as "On", "Off" or "Timed" each day of the week. Under timed operation, the system will only answer calls after the start time and until the stop time for the specified Day of Week. Call received during the "Timed" period receive a ring no answer. Start times and stop times may be set to any value from start in the morning, stop in the evening to start in the evening, stop in the morning.

To change the configuration of an individual line, press the corresponding line number. For example, to change line 1 from "T" Timed to "O" Off, press "1". To change line 1 to "I" On Idle, press "1" again, etc.

Function Key	Action
I	Enters the line programming menu
II	
III	
IV	Exits the programming menu

To Exit – Press "CLR" or automatically after 15 seconds

5.2.2.11.1.1 Change Line Configuration – Monday

Valid Keys (1 – 8) Corresponding to the line number

To Exit – Press "CLR" or automatically after 15 seconds

Function Key	Action
I	To change Monday's line config.
II	
III	
IV	To advance to Tuesday's line config.

5.2.2.11.2 Change Line Configuration – Tuesday

Function Key	Action
I	To change Tuesday's line config.
II	
III	
IV	To advance to Wednesday's line config.

Valid Keys (0-9)

To Exit – Press "CLR" or automatically after 15 seconds

5.3 Test Mode

Test mode provides access to verify the basic integrity of the SMART CTR2000. Included in the test mode functions are;

- Software Version Information
- Key Pad Test
- LCD Test
- Non volatile Memory Test

Function Key	Action
I	Display software revision number
II	Test the key pad
III	Test LCD Display
IV	Test nonvolatile memory

To Exit – Press "CLR" or automatically after 15 seconds

5.3.1 Software Version

The software version information provides useful information for customer support and new feature additions.

Software Version X.X

To Exit – Press "CLR"

5.3.2 Key Pad Test

This test ensures that the key pad is working properly and that the key caps are properly labeled. The key is displayed as long as it is depressed. The "Clr" key is never displayed but resulting in exiting the key pad test.

**Key Test, Clr to End
Key Pressed =**

To Exit – Press "CLR"

5.3.3 LCD Test

The LCD Test is an alternating display where one line contains text, and the only is solid black.

LCD Test, Clr to end

To Exit – Press "CLR"

5.3.4 Nonvolatile Memory Test

System configuration parameters and call counts are stored in non volatile memory. This test ensures that the non volatile memory retention battery is within acceptable limits.

**Memory Device Test
Memory Passed!**

**Memory Device Test
Memory Failed!**

To Exit – Press "CLR"

APPENDIX A

Diagram 1 (page 15): Hookup for one CTR2000 to DASA300.

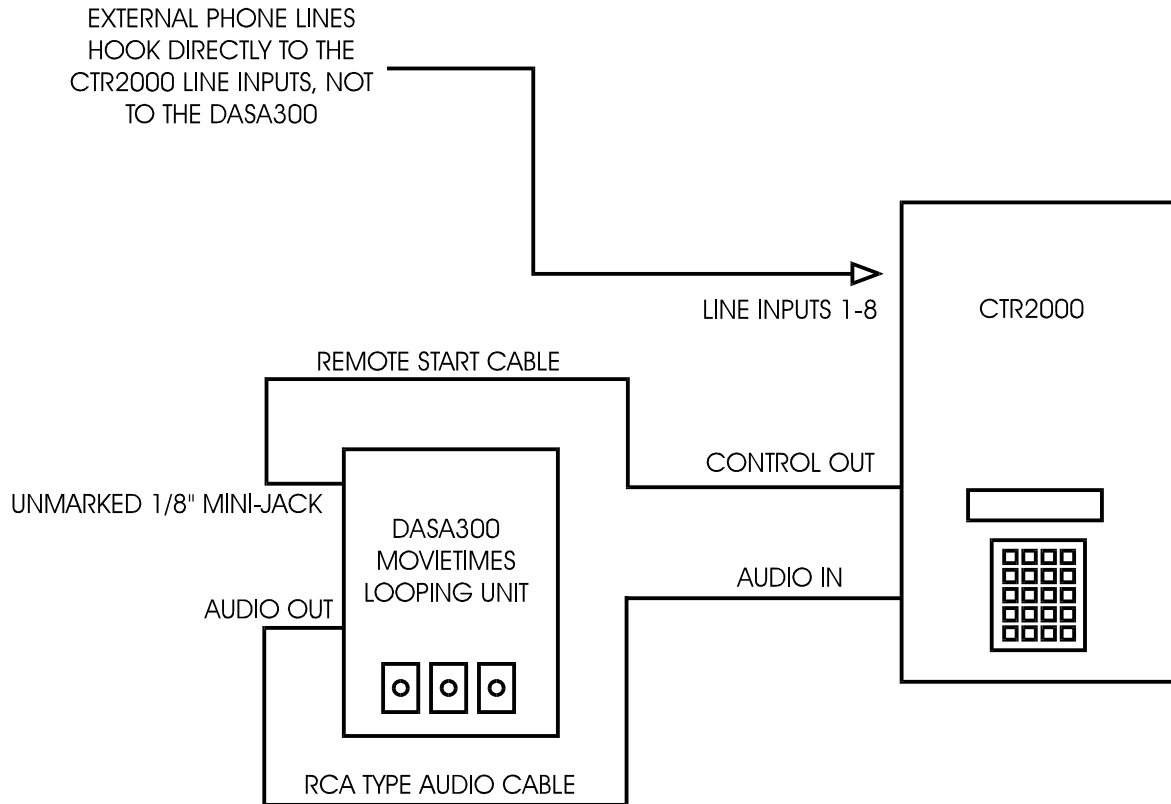
Diagram 2 (page 16): Hookup for multiple CTR2000's to DASA300.

Notes for both diagrams:

- 1) All CTR2000 "Control" terminals require 8-pin din connectors.
- 2) The Remote Start cable is an 8-pin din to 1/8" mini-jack cable.
- 3) The DASA300 MUST BE a looping version unit. If not, then an internal EPROM may be ordered from the factory that will make the unit compatible with the CTR2000.

Hookup of one CTR2000 to DASA300

DIAGRAM 1



Hookup for multiple CTR2000's to DASA300

