INSTAPLAY™

USER MANUAL
&
INSTALLATION INSTRUCTIONS

February, 2003

ID #CMYG

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WARNING: This equipment generates, uses and can radiate radio frequency energy. If not installed and used in accordance with the instruction manual, it may cause interference to radio communications. The rules with which it must comply afford reasonable protection against such interference when it is used in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user will be required to correct the interference at his own expense.

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INTRODUCTION

USING THE ALARMCO INSTAPLAY RECORDER/ANNOUNCER

Instaplay is normally used to broadcast prerecorded messages whenever one of its contact closure inputs closes. These messages can be individually changed at any time. Instaplays are available with 4, 8, or 16 inputs.

Each input has a corresponding playlist. A playlist is a single message, or a list or sequence of messages. Triggering Control Input 1 causes playlist 1 to be said, Input 2 causes playlist 2 to be said, and so forth.

The following chart contains a brief summary of Instaplay's commands. More complete descriptions can be found in the appropriate chapters.

For simple applications, you only need to read Chapters 1, 3, and the Installation Instructions. You may also want to look at the examples shown in Chapter 11.

To control Instaplay, you use a standard touch tone telephone. You "talk" to Instaplay in touch tone. It "talks" to you in English. Once you specify the command you want to perform, e.g., RECORD, it gives you instructions telling you what to do.

Instaplay is easy to use. This manual will lead you step by step as you record a message, change it, and so forth.

COMMAND LIST

						CHAPTER
Press:	*	1	#	to	RECORD	1
	*	2	#	to	HEAR MESSAGE	1
	*	3	#	to	ERASE	1
	*	4	#	to	SET SPACING	2
	*	7	#	to	SET RECORD SOURCE	1
	*	8	#	to	SET RECORD SPEED	4
	*	9	#	to	SET MESSAGE MUSIC	4
	*	10	#	to	SET PA SOURCE	4
	*	31	#	to	SET MODE NUMBER	3
	*	41	#	to	SET PLAYLISTS	2
	*	42	#	to	HEAR PLAYLISTS	2
	*	44	#	to	CANCEL PLAYLISTS	2
	*	51	#	to	STOP REMOTE (Optional)	6
	*	52	#	to	SET GROUP NUM. (Opt.)	9
	*	61	#	to	TIMED RECORD (Optional)	6
	*	62	#	to	SET RELAY (Optional)	5
	*	71	#	to	SET CODE (Optional)	6
	*	127	#	to	RESET	1

Instaplay Command Summary

1 RECORD A MESSAGE

Press:	*** 1 #**		
Press:	**(message number) #**		(Starts recording selected message)
Speak	into control phone	or	(Instaplay records from phone, ... or
	into microphone	or	... microphone, ... or
	play taped message		... aux. input) [See #7 below]
Press:	**#**		(Stop recording)

2 HEAR A MESSAGE

Press:	*** 2 #**		(Preview message with control phone)
Press:	**999 #**	or	(To hear all messages ... or
	(message number) #		... to hear selected message)

3 ERASE A MESSAGE

Press:	*** 3 #**		
Press:	**999 #**	or	(To erase all messages ... or
	(message number) #		... to erase selected message)

4 SET SPACING BETWEEN MESSAGES

Press:	*** 4#**	
Press:	**(spacing in seconds) #**	(Set new spacing)

7 SET RECORD SOURCE

Press:	*** 7 #**	
Press:	**(1**, **2**, or **3) #**	(1 = Mic, 2 = Aux, 3 = Phone)

8 SET RECORD SPEED

Press:	*** 8 #**	
Press:	**(1000** .. **1011) #**	(1000 = longest record time, 1011 = highest fidelity. Each step shortens record time and increases fidelity)

9 SET MESSAGE MUSIC

Press:	*** 9 #**	(Music on during message?)
Press:	**(0**, **1**, or **2) #**	(0 = Off, 1 = On, 2 = On for odd only)

10 SET PA SOURCE

Press:	*** 10 #**	
Press:	**(1**, **2**, **3**, or **4) #**	(1=Mic, 2=Aux, 3=Phone, 4=Msg 250)

31 SET MODE NUMBER

Press:	*** 31 #**		
Press:	**(mode number) #**		(Set new mode number)

41 SET PLAYLISTS

Press:	*** 41 #**		(Used to enter multiple playlists)
Press:	**(playlist number) #**		(Select playlist of interest)
Press:	**(message number) #**		(For each message in the list)

42 HEAR PLAYLISTS

Press:	*** 42 #**		
Press:	**(playlist number) #**		(Select playlist of interest)

44 CANCEL PLAYLIST

Press:	*** 44 #**		
Press:	**(playlist num) #**	or	(Cancel one playlist ... or
	999 #		... cancel all playlists)

51 STOP REMOTE (Optional)

Press:	*** 51 #**	(Terminate a remote control session)
Press:	**1 #**	(To confirm that you really want to)

61 TIMED RECORD (Optional)

Press:	*** 61 #**	
Press:	**(message number) #**	(Records selected message)
Press:	**(recording time) #**	(Length of recording in seconds)

62 SET RELAY (Optional)

Press:	*** 62 #**	
Press:	**(relay operation number) #**	(Relay operation code)

71 SET CODE (Optional)

Press:	*** 71 #**	
Press:	**(new code number) #**	(Redefines the new security code)

127 RESET

Press:	*** 127 #**	(Resets Instaplay to Factory Defaults)
Press:	**1 #**	(To confirm that you really want to)

CHAPTER 1: RECORDING MESSAGES

This chapter tells how to record messages. Instaplay lets you record up to 250 messages and change them at any time. The only limitation is that the combined length of your messages cannot exceed the total recording time available for your unit.

Getting started

Any standard touch-tone telephone can be used to program the Instaplay. Simply connect a standard touch-tone telephone into the RJ-11 jack labeled "Control Phone" on the back of the Instaplay. If you have power to the unit, it should now be operable. (For detailed installation instructions, please refer to page 43 in this manual.

Pick up the handset on the control phone and listen to it.

You can always hang up at any time. Instaplay will stop whatever it is doing. So if you ever get confused, just hang up and start over.

Notice where the "star" [*****] key and the "pound" [#] key are. You'll be using them a lot, as all commands begin with [*****] and end with [#].

Your first command

Let's do as the voice suggests and press the keys: *** 0** #. Instaplay will start reading the command list.

After it reads the first few commands, press: *** 0** # again.

This time after it reads a command or two, press: *****.

Any time you press *****, Instaplay stops what it's doing and gets ready for a new command number. That means you can restart a command or switch to a new one at any time. Since you have a typed list of the commands in this manual, it's faster to look at it than to have Instaplay read the list to you. If you want to play around a bit now, go ahead.

The RESET command

The RESET command erases and cancels everything that's been done to the Instaplay. All messages are erased and any programming is canceled.

Press: *** 127** # and listen.

A RESET is serious business. Instaplay makes you confirm you really want to do it by pressing: **1** #.

A RESET returns all Instaplay choices to their default values, that is, their factory settings. For example, even if someone changed it before, the record source is now set for Microphone.

Instaplay will be reset after a power outage. If your installer did not provide one, you may want to consider a backup battery and charger to maintain your messages and programming in the event of a power failure.

Setting the RECORD SOURCE

Default = MIC

Instaplay can record from a microphone, from its Aux. input (usually a tape recorder), or from the mouthpiece of the control phone. You have to specify which you want to use.

Press: *** 7** # and listen. (Don't forget you can press *** 7** # again if you want to hear the instructions again.)

If you have a microphone, we'll be using it so you don't need to press anything. If you don't have a microphone, select the phone as the record source by pressing **3** # (and whenever we say "microphone", you think "phone"). If you changed the record source, you can press *** 7** # to confirm that it's now set the way you want.

Should you want to record from the Aux. input, the entire sequence of commands would be:

*** 7** #
2 #

When recording from the Aux input, you can monitor by listening on the control phone while the recording is being made.

RECORD MESSAGE

Instaplay messages are numbered from 1 to 250. You can record messages in any order.

Press: *** 1** # and listen.

Instaplay first responds by telling how many seconds of record time are available (at the current RECORD SPEED setting, as described in Chapter 4). It then tells you the current RECORD SOURCE. In addition, you can

use the control phone to monitor the recording as it is being digitized. (If you tap on the microphone, you should hear it through the phone.)

We're going to record message 4. Get ready to talk into the microphone, but don't do anything until we describe the steps:

Press **4** to indicate the message to record.

Press # to start the recording.

Say into the microphone something like, "This is message 4."
or "Message 4 sounds like this."

Press: # to stop the recording.

Do the same for messages 1, 2, and 3. Make messages 2 and 3 at least ten seconds long. (You don't need to press *** 1** # again, once is enough.) Don't start each recording until you're ready to talk. Stop each recording as soon as you finish.

You can record over an existing message by saying something like, "This is a new version of message 3." If you want to find out how much recording time is still available, press: *** 1** #.

Hearing the recorded messages

You can review your recordings by using the HEAR MESSAGE command.

Press: *** 2** # and listen
Press: **999** # and listen.

How did they sound? Want to hear message 2 again?

Press: **2** #.

If you want to hear just the first several seconds of a message, press:
(1000 + message number) #.

Press: **1002** # to hear the beginning of message 2.
Press: **1004** # for message 4.
Press: **1999** # to hear the first part of all messages.

If they didn't sound great, don't worry. There are some tips in Chapter 7 that will make your recordings sound much better. The objective was to record several messages, and you succeeded.

Saving time

Instaplay's prerecorded instructions are there for your benefit. Once you've done a command a few times though, you don't need most of them.

If you know what keys you're going to press next, don't wait. Go ahead and press them. For example,

> Press: *** 2** #, then without waiting,
> Press: **999** #.

ERASE MESSSAGE

Press *** 3** # and listen. Press **2** #. Message 2 is now gone (and its record time is available again). You can verify this with the HEAR MESSAGE command, *** 2** #.

Changing messages

If you want to change a message, you don't have to erase it before recording it again. When you record a message, Instaplay automatically erases any previous version. The new recording can be either longer or shorter than the original.

CHAPTER 2: CREATING PLAYLISTS

Default = Playlist 1 contains message 1
Playlist 2 contains message 2
... and so forth up to playlist 20

If you have a single message for each contact closure, you can skip the remainder of this chapter.

With playlists, multiple messages can be associated with a single contact closure input.

SET PLAYLISTS

This command lets you create up to 20 different playlists.

Press: *** 41 #** and listen.

Instaplay first responds by asking you to enter the number of the playlist you want to create. Let's create playlist 1. Press: **1 #** and listen.

You next enter the message numbers you want on the chosen playlist. For example:

7 #
10 #
8 #
7 #
24 #

...to play messages 7, 10, 8, 7 again, and then 24.

There is a 100 entry maximum for your playlist entries. All entries can go in one playlist, or they can be distributed any way you want among multiple playlists.

Up to 20 playlists can be defined, although your Instaplay has only 4, 8, or 16 inputs. The remaining playlists are not assigned to inputs, but are still available. For example, you could use them to record your own sequence of tones. See [1001 - 1020] below.

SET SPACING

Default = 1 second

Press: *** 4 #** and listen. The spacing between messages is measured in seconds. You can select any spacing you want between 0 seconds and 2 hours and 45 minutes. If, for example, you want a spacing of 10 minutes, you should press **600** #. (For several hours of spacing or non-standard spacing between messages, please refer to "Manual Spacing," later in this chapter.)

Note: Setting the spacing to 65,535 corresponds to "infinite spacing." The timer never times out and does not automatically advance to the next message. In this case, an "advance" button, along with the correct Mode setting, would be used to manually advance the playlist. See the Programming Examples for a use of this feature.

SPECIAL PLAYLIST ENTRIES

There are several numbers you can enter in a playlist to handle special requirements.

[1 - 250]

The selected message will be played.

[901 - 910] "Splash Tones"

The selected announcement tone will be played followed by a short pause. The various tones can be auditioned by using the * 2 # (HEAR MESSAGE) command and then entering 901 #, 902 #, and so forth.

Entries 901 through 905 are "splash" tones with a slight pause after each. Entries 906 through 909 are individual tones with almost no pause after them. They are used to create your own "melody." Entry 910 is $^1/_2$ second of silence for use after (or during) your own sequence.

[1001 - 1020] "Say Playlist Once"

An entry of (1000 + playlist number) will cause the requested playlist to be played once and then the current playlist to continue. This can be used to conserve entries if a long sequence shows up in several playlists. Define it once as a separate playlist and then request it from each of the original lists.

[10000 - 19999] "Manual Spacing"

If you want to manually control the spacing between individual messages, put an entry in the playlist equal to (10,000 + Spacing). For example:

4 #
12 #
10000 #
19 #
10010 #
50 #

In this example, messages 4 and 12 will be separated by the normal spacing. Messages 12 and 19 will have zero time between them. Messages 19 and 50 will have 10 seconds between them.

If several hours of spacing is desired between messages, multiple playlist entries can be used. For example, 7200 seconds = 2 hours; to pause for 4 hours, simply enter **17200** twice in a row.

[30000, 30001] "Press to Continue"

When the Instaplay reaches a playlist entry of 30000, it will not proceed unless Control Input 2 is OFF. When it reaches an entry of 30001, it will not proceed unless Control Input 2 is ON.

For example, if input 2 is ON when a push-button is pressed and this is the playlist:

30001 #
1 #
30001 #
2 #
30001 #
3 #
30000 #

With the press of the button, message 1 starts to play. After message 1, if the switch is still on, Instaplay will sequence to message 2. If the switch is off, Instaplay will proceed to message 2 when the button is pressed again. Likewise for message 3.

NOTE: The first digit of the Mode Number must be either a 2 or 3 for this feature to operate.

NOTE: For additional special playlist entries, please refer to Chapter 5, Output Relay Option, and Chapter 7, Second Channel Options.

[9000 - 9999] "Internal Timers Option"

With this option, Instaplay can ignore a contact closure for a specified amount of time. For example, when Instaplay is used for "Customer Assistance Requests," each contact closure can have its own timeout period.

If you want to manually control the timeout period for a specific contact closure input, put an entry in the playlist equal to (**9000 + Timeout**). For example, Playlists 6 and 7 may contain the following entries:

Playlist 6:

25 #	Message 25, e.g., "Attention Sales Associates"
6 #	Message 6, e.g., "Customer assistance in major appliances"
9075 #	(Wait for 75 seconds)

Playlist 7:

25 #	Message 25, e.g., "Attention Sales Associates"
7 #	Message 7, e.g., "Customer assistance in hardware"
9045 #	(Wait for 45 seconds)

Each department can specify its own "wait" time, that is, the amount of time that will elapse before the same message trigger will be recognized.

To use this feature, Mode Number must not remain at the default setting to "Queue all requests." For more information, please refer to Chapter 3.

HEAR PLAYLISTS

This command lets you review the message numbers that are on different playlists. Press: *** 42 #** and listen. Now select any playlist number and listen. Instaplay will read back the numbers you have entered. For example, to hear playlist 1, press:

*** 42 #**
1 #

CANCEL PLAYLIST

This command lets you cancel a selected playlist or all playlists.

Press: *** 44 #** and listen. Your choices are:

1 .. 20	Cancel the selected playlist.
999	Cancel all playlists.

For example, to cancel playlist 3, press:

*** 44 #**
3 #

CHAPTER 3: SETTING THE MODE NUMBER

Default = 0 "Queue all requests"

Instaplay is designed to handle a wide variety of applications. You custom tailor its operation to the current requirements by entering a 4 digit Mode Number. If, for your application, you want to use all Control Inputs to trigger messages and simply queue each triggered message, skip to Chapter 4.

SET MODE NUMBER

To set the Mode Number, follow these instructions. If you need to figure out how to define the Mode Number, read the following section.

Press: *** 31 #** and listen.
Press: **(Mode Number) #**

Determining the Proper Mode Number

This chart and the following explanation tell how to select the mode number.

Instaplay Mode Number . . . . . Digit 1 2 3 4

Input 2 Used Only By Playlist Entry	Input 3 Advances Announcing	
No	No	0
No	Yes	1
Yes	No	2
Yes	Yes	3

---- Digit 1

Input 1 Turns on PA	Input 4 Stops Announcing	
No	No	0
No	Yes	1
Yes	No	2
Yes	Yes	3

---- Digit 2

Say Twice	Instant On	
No	No	0
No	Yes	1
Yes	No	2
Yes	Yes	3

---- Digit 3

Input Request Handling	
Queue all requests	0
Queue new requests	1
Queue new requests, repeat if still on	2
Cancel others, restart	3
Cancel others, no restart	4
Cancel lower priority, repeat if still on	5

---- Digit 4

Since relatively few applications require setting the first or second digit to anything but 0, and many more applications require setting the fourth digit, we will discuss these digits in reverse order.

Note: When entering these numbers, it is not necessary to enter leading zeroes, e.g., Mode "2" can be entered "0002," "002," "02," or "2."

Fourth Digit (Message queuing and prioritizing)

The fourth digit determines how input requests are handled. A request is a transition from OFF to ON. For most digit values, leaving an input ON has no effect, only the transition from OFF to ON does. There are 6 choices for the fourth digit, i.e., 0, 1, 2, 3, 4, and 5.

[0] Queue all requests.
All requests are queued. Pressing an input pushbutton several times will cause the associated playlist to be said several times.

[1] Queue new requests.
All new requests are queued. Any request for a playlist that is currently being said or is already in the queue will be ignored.

[2] Queue new requests, repeat if still ON.
All new requests are queued. Once all requests have been satisfied, those inputs that are still on, if any, will have their playlists announced continuously on a round robin basis.

[3] Cancel others, restart.
Any playlist currently being said is aborted and the playlist associated with the input request is started. Pressing an input pushbutton several times will cause the associated playlist to be aborted and restarted several times.

[4] Cancel others, no restart.
Any playlist other than the requested playlist will be aborted and the newly requested playlist will be started. If the requested playlist is currently being said, the request is ignored and the playlist continues.

[5] Cancel lower priority, repeat if still ON.
The playlists are ranked in priority. Playlist 1 has the highest priority, playlist 2 is second, and so forth. A request will abort any lower priority playlist and start the newly requested playlist. It will not restart its own playlist or affect a higher priority one. When a playlist ends the highest priority input still on, if any, will have its playlist started.

Third Digit (Repeat twice / Instant "ON")

The third digit lets you repeat playlists automatically and determines how abruptly messages are started and stopped.

If the digit value is 0 or 1, playlists will be said once for each input request. If the value is 2 or 3, they will be said twice.

If the digit value is 0 or 2, messages are started and stopped gently. The output music level steps down and a slight pause occurs before the message starts. At the end of the message, the reverse occurs. If the digit value is 1 or 3, the music level is cut and the message starts immediately.

Second Digit (Live PA Announcements / "Stop" Input)

The second digit determines how Input 1 and Input 4 function. If the digit is 0, turning ON the inputs simply requests playlists 1 and 4 respectively.

If the digit value is 2 or 3, Input 1 is treated as a Special Control Input. When Input 1 goes ON, any message currently being said is aborted and the PA source (Mic, Aux, phone, or Message 250) is fed directly through to the Line Out terminals. Any queue of messages waiting to be announced is not affected.

If the digit value is 1 or 3, Input 4 is a Special Control Input. When Input 4 is ON, all message announcing, except the PA, stops and any queue of waiting messages is canceled.

Please refer to Chapter 4, "Set PA Source."

First Digit (Manual advance through Playlist)

The first digit determines how Input 2 and Input 3 function. If the digit is 0, turning ON the inputs simply requests playlists 2 and 3, respectively.

If the first digit value is 1 or 3, Input 3 is a special control input. A transition from OFF to ON at Input 3 advances the announcer to the end of its current activity. If it's saying a message, the announcer goes to the end of that message. If it's waiting for a timer or an input, it stops waiting and proceeds to the next step. This control feature is especially useful for manually advancing through the current playlist.

> Note: If the Spacing is set to 65,535 (infinite spacing), this is the **only** way to advance the playlist to the end of the timing interval. Please refer to "Spacing" in Chapter 2, and Programming Example 3.

If the first digit value is 2 or 3, Input 2 is defined as a Special Control Input. A contact closure on Input 2 will **not** request playlist 2. Instead it is reserved for use by special playlist entries which check whether it's ON or OFF. They don't let the playlist proceed unless Input 2 is in the desired state.

CHAPTER 4: RECORD SPEED, MESSAGE MUSIC, PA SOURCE

SET RECORD SPEED

Default = 1007

Press: *** 8 #** and listen.

Instaplay has twelve different recording speeds numbered from 1000 to 1011. The slowest recording speed is 1000, the fastest is 1011. You can use the SET RECORD SPEED command to fine tune the speed of your recordings.

Lower recording speeds give lower fidelity and longer recording time. Higher speeds give higher fidelity, but shorter recording time.

The RECORD command will tell you the total recording time available in your unit at the present speed setting. If you have plenty of time at a higher speed, use it. If not, use a lower speed for some or all of your messages. If you record different messages at different speeds, Instaplay will automatically play each one back at the correct speed.

INSTAPLAY™ RECORDING CAPACITIES (Min:Sec)

Record Speed | V	MODEL 110	220	330	430	540	650	760	860
1000	1:47	3:35	5:22	7:10	8:57	10:45	12:32	14:20
1001	1:40	3:21	5:01	6:42	8:22	10:03	11:43	13:24
1002	1:34	3:08	4:42	6:16	7:50	9:24	10:58	12:32
1003	1:27	2:54	4:21	5:48	7:15	8:42	10:09	11:36
1004	1:20	1:41	4:01	5:22	6:42	8:03	8:56	10:44
1005	1:14	2:28	3:42	4:56	6:10	7:24	8:38	9:52
1006	1:07	2:14	3:21	4:28	5:35	6:42	7:49	8:56
1007	**1:00**	**2:01**	**3:01**	**4:02**	**5:02**	**6:03**	**7:03**	**8:04**
1008	:53	1:47	2:40	3:34	4:27	5:21	6:14	7:08
1009	:47	1:34	2:21	3:08	3:55	4:42	5:29	6:16
1010	:40	1:21	2:01	2:42	3:22	4:03	4:43	5:24
1011	:33	1:07	1:40	2:14	2:47	3:21	3:54	4:28

Recording Speed:

Low:	1000
Standard:	1007 (Default)
High:	1011

SET MESSAGE MUSIC

Default = ON

Press: *** 9 #** and listen.

Having message music ON means that the background music is playing quietly during your message. The actual volume is set with a volume control on the back of the unit. This command lets you turn background music OFF completely if your background music includes talking or if your recorded messages include their own music.

As a third choice, you can have message music ON for all odd numbered messages and OFF for even numbered messages. For example, use odd numbers when recording your "home made" or voice-only messages and even numbers for studio productions that already include music.

Press: **0 #** to turn off message music
1 # to turn it on
2 # to turn it on for odd numbers, off for even

SET PA SOURCE

Default = MIC

Press: *** 10 #** and listen.

The Mode Number may be set to provide a PA feature as described in Chapter 3. If so, this command is used to select the PA source. The possible sources for "live" announcements are Microphone, Aux, or Phone. A fourth choice is to have message 250 repeat every few seconds whenever the PA input is ON.

Press: **1 #** for Mic
2 # for Aux.
3 # for Phone
4 # for Message 250

CHAPTER 5: OUTPUT RELAY OPTION

Relay A Default = ON WHEN TALKING
Relay B Default = OFF

Instaplay comes standard with one Form C output relay that is energized (ON) during announcements and OFF otherwise.

The output relay (-OR) option provides a total of 2 output relays (Form C contacts) and enables you to control them both with touch tone commands and playlist entries.

Relay	Operation Number	Description		
Relay A	2000	If unlocked, set to	OFF	
	2001	If unlocked, set to	ON	
	2002	If unlocked, set to	WHEN TALKING	
	2003	Unlock		
	2004	Unlock and set to	OFF	
	2005	Unlock and set to	ON	
	2006	Unlock and set to	WHEN TALKING	
	2007	Lock		
	2008	Unlock and set to	OFF	then Lock
	2009	Unlock and set to	ON	then Lock
	2010	Unlock and set to	WHEN TALKING	then Lock

Relay B	2020	Set to	OFF	
	2021	Set to	ON	
	7001 - 7999	Set ON & hold for	0.1 — 99.9 sec.	then OFF

The default value for Relay A is unlocked, when talking. "When talking" means that it's ON during announcements, OFF otherwise. The default value for Relay B is OFF.

SET RELAY Touch Tone Command

To manually control the relay with touch tones, press:

* 62 # (relay operation number) #

Special Playlist Entries

By placing a relay operation number on a playlist, Instaplay will coordinate the relay commands with messages to produce the specified results. With a 7xxx entry, the playlist turns on the B relay and then proceeds immediately to the next entry while the relay is doing its timed pulse. A 7xxx entry in a playlist between two messages will turn on the relay at the end of the first message. The spacing between messages comes after the relay operation starts.

The LOCK feature lets one set of commands override another. For example, a playlist may be run which locks a relay ON or OFF and it will maintain that state even though other playlists may run.

CHAPTER 6: TELEPHONE CONTROL OPTION

The Telephone Control (-TC) option lets you dial into the announcer over a switched telephone system from a standard touch tone phone. Once the announcer answers, the calling phone can remotely control the Instaplay to record new messages, change playlists, and so forth.

After the Instaplay detects ringing and answers, the caller must usually enter a code number (security code) before the announcer will accept commands. Once the proper code has been entered, the operation of the remote phone for controlling the unit is very similar to that of the local control phone plugged directly into the announcer.

> WARNING - DO NOT PLUG ANYTHING EXCEPT A STANDARD TOUCH TONE PHONE INTO THE MODULAR JACK MARKED "CONTROL PHONE." DO NOT PLUG A TELEPHONE LINE ONTO THIS CONNECTOR. ATTACHING A TELEPHONE LINE TO THIS MODULAR JACK COULD PERMANENTLY DAMAGE THE ANNOUNCER.

Accessing the Announcer from a Remote Phone

When you dial the announcer's extension number on your phone system, the Instaplay detects ringing on its line and answers the phone. What happens next depends on the announcer's current code number.

If the security code number is set to "0," the announcer stops its normal announcing activities, talks to you over the phone, and is ready to accept touch tone commands without entering a password.

If the code number is in the range of 1 .. 99,999, the announcer stops its normal announcing activities and tells you to "**Press Star, Number, Pound**." If you enter the correct code, the unit will talk to you and be ready to accept commands. An incorrect code causes the Instaplay to hang up. If you are aware of entering the wrong code number prior to hitting the "#," just start over with the " * " key.

If the code is 100,000 or larger, the announcer does not talk to you, but instead continues its normal announcing. If you enter *** (correct code number)** #, it stops announcing, talks to you and is ready to accept commands. An incorrect code causes the Instaplay to hang up.

The caller has 30 seconds to enter the code before the announcer hangs up.

SET CODE (Changing the Security Code Number)

Default = 98,304

To hear the current value and (possibly) change it:

Press: *** 71 #** and listen. Then
Press: **(new code number) #**
Press: ***71 #** and listen to verify the new code number.

Security code numbers can range from 0 to 1,000,000,000.

Remote Recording of Messages

When the *** 1 #** record command is used from a remote phone, the recording source is always the remote phone. This does not affect the recording source specified by the *** 7 #** command which is used when the local control phone is off hook.

TIMED RECORD

If you know, for example, you'd like to record for exactly 30 seconds, you may choose to use the TIMED RECORD command. Sometimes you're given a tape with messages recorded on it., or perhaps you would like to record a certain sound effect. The TIMED RECORD command is used. The sequence of operations is:

Press: *** 61 # (message number) #**
(recording time) #

The Instaplay records from the Control Phone (either local or remote) for the specified number of seconds. The touch tone detector is turned off during the message recording. This command is thus useful if the message to be recorded contains touch tones or music or speech that imitates touch tones.

The command will be rejected if a recording time greater than 860 seconds is specified. If memory capacity is exhausted, recording will stop. The touch tone detector will not be turned back on, however, until the specified recording time is completed.

Because recording memory does not come in one second increments, the total recording memory used may not exactly equal the sum of the recording times.

Remote Hearing of Messages

The *** 2** # command turns off the DTMF detector while it is playing messages back over the remote phone. If you want to hear just the first several seconds of one or more messages, enter **(1000 + message number)** instead of the message number. For example, to hear a short sample of message 5, press **1005** #. To scan through the first several seconds of each of the recorded messages, press **1999** #, rather than the usual **999** #.

STOP REMOTE Command to Terminate Remote Control Session

An announcer will stop responding to remote commands and hang up when any of the following happens:

1. The Stop Remote Programming command sequence (*** 51** # **1** #) is entered by the caller.
2. While Instaplay is waiting for a command, more than 30 seconds passes without receipt of the "#" touch tone. (During a timed message recording, the 30-second timeout starts at the end of the recording time.)
3. A RESET command (*** 127** # **1** #) is executed.
4. The local control phone is taken off hook.

CHAPTER 7: SECOND CHANNEL OPTIONS

Second Channel (-2C)

The Second Channel (-2C) option allows Instaplay to broadcast messages over either or both audio output channels. Instaplays with this option are equipped with a second audio output channel that is available on the screw terminals marked "LG" or "DTMF," which are to the right of the standard "Line Out" terminals.

This is a transformer isolated, 600 Ohm, line level output. No volume control is available. Background music fed through the "Music In" port does not appear on this channel.

To access the second channel, add **[8000]** to the desired message number on a playlist. For example, **8001 #** will cause message number 1 to be broadcast on the second channel.

Second Channel with Music (-2M)

The Second Music Channel (-2M) option provides the ability to simultaneously play music and broadcast messages over either or both audio output channels. Instaplays with this option are equipped with a second audio output channel that is available on the screw terminals marked "LG" or "DTMF," which are to the right of the standard "Line Out" terminals.

Three volume controls set the music level, message level, and "ducked" music volume for both channels. The music level is ducked down on the active channel only during messages. The other channel is unaffected.

Music will be ducked beneath the messages appearing on the second channel. It cannot be "cut" completely.

To access the second channel, add **[8000]** to the desired message number on a playlist. For example, **8004 #** will cause message number 4 to be broadcast on the second channel.

CHAPTER 8: SERIAL LINK OPTION

With the serial link option, Instaplay's announcements can be triggered over an RS-485 serial link.

The UART in the announcer is set up for serial communication with the following specifications:

Baud rate:	9600
Data bits:	8
Parity:	None
Stop bits:	2

The electrical signal levels meet the RS-485 specification. All characters are ASCII.

The format for a command is:

$Unit;Command(line terminator)

For example, to request unit 1 to say message 5, enter: **$1;5(RETURN)**

- The line must start with "**$**."
- The unit number is one or more decimal digits. Single digits are preferred.
- The unit number must be immediately followed by "**;**."
- The command is one or more decimal digits. The command can be a message number between 1 and 250, or a playlist number between 1001 and 1020. A command for a single message or playlist will cause that message to be played one time.
- The line must be terminated immediately after the command by a **LINE FEED** character or a **RETURN** character.
- No spaces or tabs may be included within the line.
- The **DELETE** character will delete the last character entered.
- The **CONTROL-X** character will delete the entire current line.

To set each Instaplay's unit number, use the Control Phone to enter the command:

***71#unit number#**

CHAPTER 9: ADDRESSABLE ANNOUNCER OPTION

With this option, each Instaplay has its own unique hardware address and can be addressed as a member of a group, as well. Any number of addressable Instaplays can be individually controlled over a single control channel that is broadcast to all of the announcers. This broadcast stream contains the telephone touch-tones to control the announcers and any announcements that are to be recorded.

Each announcer's messages, playlists, and so forth can be changed remotely at any time. No on-site personnel are involved.

Addressable Instaplays contain features designed specifically for this type of operation, as described in this section. You should be thoroughly familiar with the standard features as described in earlier sections of this manual.

Addressable Instaplay Commands

The following commands are used to program Addressable Instaplays either from the local control phone or via the remote control channel:

Press:	*	9276 #	(Address)	#	To Address Unit

Press:	*	1	#	to	RECORD
	*	3	#	to	ERASE
	*	4	#	to	SET SPACING
	*	8	#	to	SET RECORD SPEED
	*	9	#	to	SET MESSAGE MUSIC
	*	10	#	to	SET PA SOURCE
	*	41	#	to	SET PLAYLISTS
	*	44	#	to	CANCEL PLAYLISTS
	*	51	#	to	STOP REMOTE
	*	61	#	to	TIMED RECORD
	*	62	#	to	SET RELAY (Optional)

The following commands are valid **only** if the Instaplay is being programmed locally or by using its unique hardware address (not a group address).

*	52	#	to	SET GROUP NUMBERS
*	53	#	to	HEAR ADDRESS
*	127	#	to	RESET

Addressing over the Satellite or SCA Channel

Each addressable Instaplay constantly monitors the control channel, i.e., the satellite or FM-SCA source. To address a single announcer, the control channel must send the following touch tone sequence:

*** 9276 # (address) #**

Up to 5 addresses can be sent, as in the following touch tone sequence:

*** 9276 # (addr1) # (addr2) # (addr3) # (addr4) # (addr5) #**

Each announcer will compare each address broadcast with:

1. Its own unique hardware address.
2. The group addresses (if any) assigned to it.

If a "match" occurs, the addressed announcer will stop its normal announcing and enter the Remote Programming mode. In Remote Programming mode, the announcer will accept touch tone commands received over the control channel. If no "match" occurs, the announcer will ignore all commands received over the control channel.

HEAR ADDRESS (Unique Hardware Address)

Each addressable Instaplay has a unique hardware address. To determine this address, plug a phone into the announcer's "Control Phone" port. Press: *** 53 #** and listen. You will hear the hardware address, along with any group addresses that you have dynamically assigned to this announcer.

The five-digit hardware address is set at the factory and never changes. Some commands, e.g., RESET, will not be accepted over the control channel unless the hardware address was used to address the announcer.

SET GROUP NUMBERS (Define Group Addresses)

Each addressable Instaplay can be dynamically assigned up to 3 group addresses. By giving the same group address to several dozen (or several hundred) announcers, those announcers can all be addressed and controlled simultaneously.

For example, a single announcer may be part of a group of announcers in the Eastern Time Zone, and part of a particular convenience store chain, and part of a particular C-store chain that has gas pumps outside.

Group addresses are either assigned locally or over the control channel. When assigning group addresses over the control channel, the Instaplay must be addressed with its unique hardware address.

To set an announcer's group address(es), enter the following:

*** 9276 # (hardware addr) #**	to address a specific announcer
*** 52 #**	... then for each group address
(group address) #	or
0 #	for no group addresses.

Valid group addresses are between **1** and **65535**.

SET RECORD SPEED

Entering Remote Programming mode automatically sets the recording speed to its default value. The speed can then be changed to a different value, if desired.

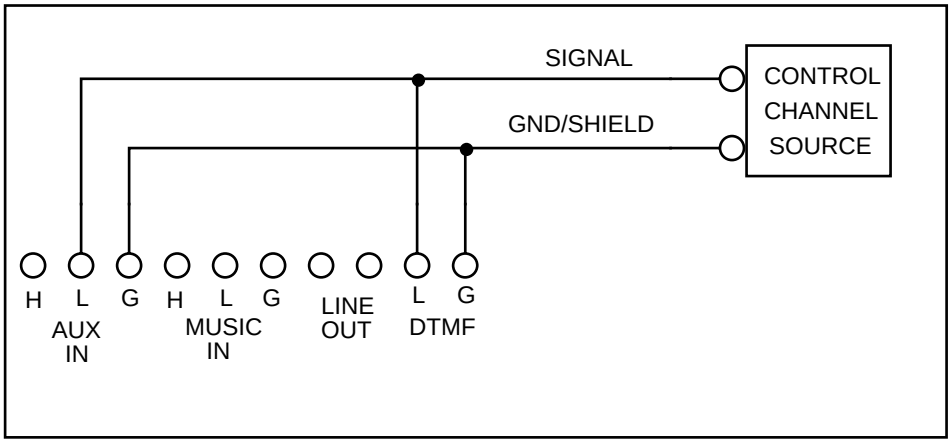
Terminating a control channel session

An addressed announcer will stop responding to control channel commands and go back to its normal announcing operation when any of the following occurs:

1. The STOP REMOTE PROGRAMMING command sequence (*** 51 # 1 #**) is received.
2. The addressing sequence (*** 9276 #**) is received.
3. More than 2 minutes (120 seconds) passes without receipt of the "#" touch-tone. (During a timed message recording, the 2 minutes start at the end of the recording time.)
4. A RESET command (*** 127 #**) is executed.
5. The local control phone is taken off hook.

Control channel connections

A single audio channel, i.e., the "control channel" can be used to supply both touch tones and messages to the addressable announcers. In this case, the DTMF and Aux (low level) inputs are jumpered together and fed by the control channel, as noted in the following diagram.



If the DTMF tones and audio to be recorded are available independently, (such as with two separate satellite channels) the source for the the DTMF control signals should attach to the DTMF screw terminals and the channel of the audio to be recorded should attach to the AUX screw terminals.

An addressable Instaplay continuously monitors the DTMF screw terminals for touch tones. The desired input level for EACH tone of the touch tone pair is 800 mV peak to peak (0.283 V rms).

CHAPTER 10: RECORDING TIPS

1. If possible, use a microphone. You'll get a much fuller, richer sound than you will using the phone.

2. Do NOT hold the microphone in your hand. Use a stand or prop it up on something solid. Turn slightly sideways to the mic. so that the "p" in a word like "punch" doesn't blast into the mic.

3. Record in a quiet place. You don't need a studio, but watch out for noises that you're so used to that you don't hear them anymore. That includes things like ringing phones, PA announcements, refrigerators, water fountain coolers, fans, air conditioning, and printers. Maybe you can turn them off for a few minutes.

4. Forget the microphone and pretend you're talking to someone you know. Picture him holding the phone or listening to the PA. Enter *** 1 # (message number)**. Say a sentence or two to that person before you start the recording, "Jim, I want to tell you about the sale we're going to have ... (take a breath and press the # key to start the recording) ..." Press # when finished.

5. Have a friend coach you the first time. He's used to your voice and knows how it sounds when you're talking naturally.

6. If possible, use the microphone as a PA so that you can hear yourself over a speaker. It's amazing how quickly you can develop a good "recording voice" when you can hear yourself talk.

7. When you breathe between sentences, either do it loud enough to be recorded (it sounds natural) or so quietly the microphone doesn't pick it up. In between sounds like noise.

8. If you want to record message 4 again to see if you can do it better, record the new one as message 5. Then you can pick your favorite and erase the other.

9. Turn on Message Music. You'll sound considerably better with music in the background. It masks all the little recording problems and makes you sound good.

CHAPTER 11: PROGRAMMING EXAMPLES

Example 1: Museum Exhibit with 4 Speeches

I have an exhibit that has 4 buttons to trigger speeches in 4 different languages. If it's in the middle of one speech and someone hits a different button, I want it to stop the original speech and start the new one. But if someone repeatedly presses one button, I want it to continue talking, not keep starting over. How can I do this?

It's easy. Record your four speeches as messages 1, 2, 3, and 4. Connect your four pushbuttons to control inputs 1, 2, 3, and 4. (Each pushbutton when pressed connects its control input to common). Program the mode to "cancel others, no restart," which is Mode Number 4. To do this,

Press: *** 31 # 4 #**

That's all you need to do. If later you decide you do want a message to start over whenever its button is pressed, just change the Mode Number to "3."

Example 2: Customer Requesting Service

Customers sometimes leave a department store without buying anything because a cashier station is unmanned or because they can't find a sales clerk to help them. I understand I can solve this problem using Instaplay. How does that work?

Install a pushbutton and sign at each cashier station and department. The sign can say, "Please push button for service." Connect each pushbutton to a different input on your Instaplay. Record the appropriate messages, such as, "A customer is requesting service in the shoe department." Finally, set the Mode Number to either "1" to say it once, or "21" to say it twice. Now each time a customer requests service, the corresponding message will be sent out over the PA. If two or three different buttons are pressed at the same time, the requests will be queued and played in order.

If you want to manually control the "timeout" period for each department (using the Internal Timers Option), put an entry in each playlist equal to (**9000 + Timeout**), as described in Chapter 2. For example, to enable a 30 second timeout, enter the following commands on each playlist:

n # message number of the requested message
9030 # (Ignore a request for the same message for 30 seconds)

Example 3: Bus Stop Announcements

I would like to have prerecorded announcements on a bus describing each stop and given just before the bus arrives at each stop. Ideally, the driver should only have to select his route when he starts and then press one button each time the next announcement should be said. Can we do this?

Yes. All you need to do is:

1) Wire up the control inputs as shown in the diagram below.

2) Set the Mode Number to "1213."

3) Set the Spacing to "65535" (infinite).

4) Record the messages.

5) Enter the desired sequence of message numbers for each bus route. Do this by creating a playlist for each bus route (Chapter 2, "* 41 #"). The operation will then be as follows:

    1. First the driver selects the route (i.e., A, B, C, D, E, or F) with the rotary switch.

    2. When he presses the Start button, the announcer goes to the beginning of the corresponding playlist (2, 4, 5, 6, 7, or 8) and starts the first message.

    3. After each message, the announcer will wait until the driver presses the Advance button before starting the next message in the Playlist.

    4. The driver can abort a message by pressing the Advance button again. This advances the announcer to the end of the current message where it waits.

    5. Once the end of a playlist is reached, the Advance button has no effect. The Start button must be pressed to start the list again.

    6. Anytime the Start button is pressed, the announcer quits what it is doing and goes to the beginning of the selected Playlist.

    7. Each playlist only needs to contain a list of the desired messages. Special playlist entries can be used, but are not required.

    8. The driver can make live announcements by pressing the PA button.

Bus Announcing System Control Circuit

Example 4: Airline Passenger Loading

I would like to use an Instaplay to make a timed sequence of announcements telling passengers when to board an airplane. A typical announcement is "All passengers in rows 12 through 24 may board at this time." The spacing between announcements varies. I would like to trigger the entire sequence by hitting a single pushbutton. How can I do it?

.

Record your announcements as messages 11, 12, 13, and so forth (The numbers are arbitrary.) Set up Playlist 1:

Press:	*** 41 # 1 #**	then,
Press:	**11 #**	
	10060 #	(60 second delay)
	12 #	
	10120 #	(120 second delay)
	13 #	
	10090 #	(90 second delay)
	14 #	
	etc.	

Set the Mode Number to either "3" or "103." Either way, when you turn on Input 1, it will start this playlist at the beginning. Use "103" if you want Input 4 to stop the announcing.

NOTE: If you want to get fancier, enter Playlists 1, 2, and 3 with the same list of messages, but with relatively short, medium, and long spacings between the messages. Then by pressing Input 1, 2, or 3, the flight attendant can select a fast, medium, or slow sequence of announcements to match the number of passengers who will be boarding.

Some of the techniques described in the previous example could be used for this application as well.

Example 5: Reducing Gas Station Drive-off Thefts

I would like to give the impression that my employees are aware of each vehicle that comes into my station for gasoline. I am familiar with studies showing that "drive-offs" go down when someone "speaks" to my customers. How can I use Instaplay to do this?

Simply record the messages for each gas pump and give Instaplay a contact closure when the next customer is ready to pump. In order to make Instaplay more believable, several messages should be used. This can be accomplished by using different voices, as well as by varying the messages themselves.

For example:

(1) "You're clear to pump on number one."
(2) "Number two is clear to pump."
(3) "Clear to pump on three.
(4) "Clear to pump on number four."

Using this scenario, Instaplay can handle up to 16 different gas pumps, while freeing up your personnel for other activities.

Installation Instructions

Please refer to the diagram on the back cover for wiring connections. Numbers in square brackets relate to this diagram.

1. Set the three volume controls at their midpoints.

2. **[#9]** Make any desired connections to the Control Inputs. A contact closure between Common and an input is ON, an open circuit is OFF. A closure to a Control Input will cause the corresponding message or playlist to be played.

   Control inputs 1 through 4 can have special functionality if specified by the Mode Number, as described in Chapter 3.
   a. Input 1 turns on the PA for "live" announcements. The selected PA source (Mic, Aux, or Phone) is fed through the line out terminals while a closure is provided.
   b. Input 2 is the "Press to Continue" input. This can be set to wait for either an ON or OFF condition. (See User Manual, Chapter 2.)
   c. Input 3 is used to trigger a Manual Advance through all playlists.
   d. Input 4, the "Stop Input," stops any recorded announcements and cancels any announcement requests that have been queued.

3. **[#7]** Make any desired connections to the output relay Form C contacts. Relay A is normally energized during announcements. At rest, the Normally Closed (NC) side is shorted to Common (C) and the Normally Open (NO) is open. During the message playback, these states are reversed, i.e., the "NC" side will open and the "NO" side will short closed to Common. Relay B (OFF by default) is controlled by the software and must be programmed to operate, as described in Chapters 2 & 5.

4. **[#5]** Prepare 16 VAC or 24 VDC connections to the associated terminals. DO NOT APPLY POWER YET. External protection should be provided. Depending on model, Instaplays draw approximately 100 to 400 ma. of current.

5. **[#6]** If an external (12V) battery will be used, prepare the connections now, including a fuse. DO NOT CONNECT THE BATTERY YET.

6. **[#3]** Connect the (transformer isolated) Line Out terminals to your amplifier.

7. **[#2]** Connect the music source, if any, to the screw terminals labeled "MUSIC IN." If the level is more than 0 dBm, connect to High (H) and Ground (G). Otherwise, connect to Low (L) and Ground (G). If you're not sure of the level, use Low.

8. If you're recording from a tape recorder or other line level record source, connect it to the screw terminals labeled "AUX. IN." If its level is more than 0 dBm, connect to High (H) and Ground (G). Otherwise, connect to Low (L) and Ground (G).

9. **[#12]** Connect the microphone, if you're using one.

10. **[#10]** Connect a standard touch tone telephone to the RJ11 jack labeled "Control Phone," **not** into the RJ11 jack labeled "T/R," if present.

11. Apply power to the announcer.

12. Audio from the music source should be present on the Line Out terminals. Adjust the music volume control to the level desired. If music volume is too loud, change to High, as described in step 7 above.

13. If you are using a 9V battery, install an alkaline (not carbon) battery in the holder provided, making sure the polarity is correct. The battery preserves the memory during short power failures. When in service, this battery should be replaced periodically, and/or after any power outage. Remove the battery if the unit is ever taken out of service.

    A fully charged 9V alkaline battery should maintain the memory of your announcer for several hours. If more protection is desirable, a 12V external battery backup with a 2-stage charger is available from ALARMCO. Twenty-four volts is also acceptable, if available.

    If, instead of the 9V battery, you're using an external 12V battery, disconnect the leads to the 9V battery holder. Connect the battery, battery charger, and a fuse.

    DANGER - Do not attempt to connect both 9V and 12V batteries to the unit.

14. Pick up the control phone. You should hear a voice prompt over the control phone each time it's taken off hook. As long as the control phone is off hook, no messages will be broadcast over the PA system, however music will continue to play through.

15. Record a test message and play it back:

    a. Turn the microphone on and get ready to talk into it.

    b. Take the control phone off hook.

    c. Press: *** 1 # 1 #** (to start recording message 1).

    d. Talk into the microphone.

    e. Press # to stop recording.

f. Hang up the phone.

g. Every time you transition Control Input 1 from OFF to ON (open to closed), message 1 will be announced over the line out terminals.

16. Set the message (MSG) volume to the desired level.

17. Unless you program it otherwise, Message Music is ON, i.e., music will play quietly during a message, as described in Chapter 4. Set the background volume (MUSIC UNDER MSG) to the level of music desired during the message.

18. **[#11]** IF YOU HAVE A TELEPHONE CONTROL OPTION, attach the telephone line from your PBX or DAA to the modular plug marked "T/R." Do not let the phone line wires touch any other terminals.

> WARNING - DO NOT PLUG ANYTHING EXCEPT A STANDARD TOUCH TONE PHONE INTO THE MODULAR JACK MARKED "CONTROL PHONE." DO NOT PLUG A TELEPHONE LINE ONTO THIS CONNECTOR. ATTACHING A TELEPHONE LINE TO THIS MODULAR JACK COULD PERMANENTLY DAMAGE THE ANNOUNCER.

With the control phone on hook, place a call to the telephone line you just connected. Instaplay should answer the phone and talk to you. On the remote phone you used to place the call, Press: *** 98304 #**. Instaplay should talk to you some more. You can now make any recording or programming changes remotely, including changing the security code, as described in Chapter 6.

19. **[#4]** IF YOU HAVE THE ADDRESSABLE OPTION, please refer to Chapter 9.

20. **[#4]** IF YOU HAVE A SECOND AUDIO OUTPUT CHANNEL, i.e., -2C or -2M, please refer to Chapter 7.

21. The following eight instructions describe how to record the "real" messages and program the Instaplay.

    a. The default "RECORD SOURCE" is set to MIC. Change it to AUX INPUT or PHONE for the real messages, if necessary.
    (* 7 # - Chapter 1)

b. Set the "RECORD SPEED." (* 8 # - Chapter 4)
Hint: By pressing *** 1 #** and listening to hear how much recording time is available, you can then adjust the speed as high as possible to provide the highest fidelity.

c. Record the messages to be stored. (* 1 # - Chapter 1)

d. After recording, listen to the recorded messages over the control phone. (* 2 # - Chapter 1)

e. Create any playlists desired. (* 41 # - Chapter 2)

f. By default, your Instaplay will queue all requests. You can change its operation, if necessary, by changing the mode number.
(* 31 # - Chapter 3)

g. The PA source for live announcements is MIC. Change it now, if necessary. (* 10 # - Chapter 4)

h. Background "MESSAGE MUSIC" is on by default. You can change it if you don't want music with your messages or you want it only sometimes. (* 9 # - Chapter 4)

22. After the real messages have been recorded in the unit, hang up the control phone.

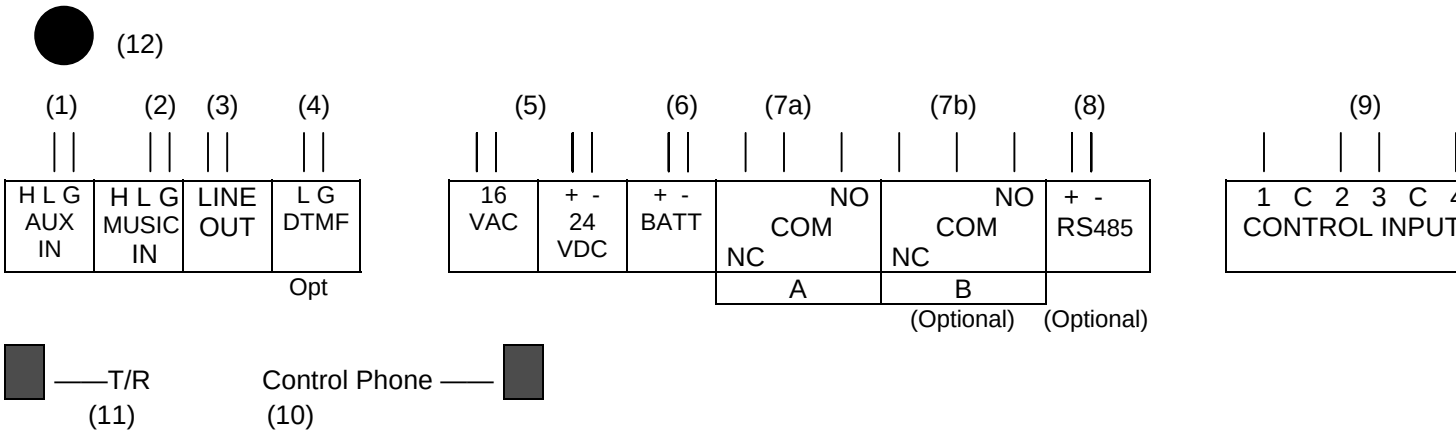
    Trigger a control input to play a message or playlist, which should play over the LINE OUT terminals.

    Listen to the messages and readjust the 3 volume controls. Adjust the "MUSIC UNDER MESSAGE" level so that the music level steps down gently before or during a message.

23. A final assessment of the playback might include the spacing between messages on playlists, if you have them. If necessary, this spacing can be changed with the * 4 # command, as described in Chapter 2.

    Unique spacings can be tailored at particular points within a playlist by using the Special Playlist Entries as described in Chapter 2.

Instaplay™
Rear Panel Connections



Legend

(1) Line Level Record Source
(2) Background Audio Input
(3) Line Level Audio Output
(4) Optional connections for Second Audio Output Channel or Addressable Instaplays
(5) Primary Power (either 16VAC or 24VDC)
(6) Battery Backup
(7) Standard Form "C" Relay (Relay A)
(7) Optional Form "C" Relay (Relay B)
(8) Optional Serial Link
(9) Contact Closure Inputs (Models available with 4, 8, or 16 inputs)
(10) Control Phone (RJ11) Connection
(11) Optional External Phone (RJ11)Connection
(12) Microphone (XLR) Connection