

IR Channel Controller

Model - 200E

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Introduction

The PMP Systems Infrared Channel Controller Model - 200 (IRD-200) is designed to provide a channel selection control for the EchoStar IR Satellite Receivers. The Channel Controller works by intercepting commands from the standard EchoStar remote controls then retransmitting the appropriate commands to the Satellite Receiver. The Controller may be programmed with a customized channel list which is stored in non-volatile memory. The Channel Controller prevents users from accessing unavailable channels or otherwise entering invalid commands while providing a straight forward, easy to use "What you see is what you get" interface.

Installation / Mounting

The Channel Controller should be mounted to the front of the receiver with the mask and foam tape assembly provided.

Begin by placing the Channel Controller face down on a flat surface with the transmitter hole toward you. Remove the protective strip from the foam tape and align the hole with the IR transmit-

ter window on the back of the Channel Controller (the notch in the mask should be on the left side). Peel off the protective strip from the other side and align the bottom edge of the mask with the bottom edge of the receiver, covering the receiver's IR receiver window. NOTE: On Model 3000 Receivers you will have to trim off the bottom edge of the mask. An A/C wall adapter is also provided. This should be plugged into the bottom of the display and the cable routed to the appropriate 110 Volt AC power source.

Programming the EchoStar Receiver

In all cases, for music installations, the receiver should be loaded with all 60 music channels. In situations where it is necessary or desirable to restrict the channel selection use the Channel Controller to limit the available channels!

Programming the IRD-200

The IRD-200C has the capacity to store over 120 channel numbers. After the initial programming, and should the need arise, the channel list may be easily edited.

The IRD-200 comes from the factory with 60 channels (920-979) for 2700 Series receivers already programmed. **If these are the channels you will be using there's no need to program the Controller!**

Receiver Selection: Please note that the initial programming depends upon receiver's model. Please choose both the correct channel range and receiver series (from table at right) for your installation. Shaded entries are for 2700 Series receivers.

The Channel Controller once programmed may be used with any EchoStar remote. However, a remote with a [SYS INFO] button is required to initially program the unit.

The Channel Control uses three special buttons on the remote for programming. These are:

[SYS INFO] Flat circular recessed button on the lower left of keypad labeled SYS INFO. Used for entering and leaving Learn Mode.

[VIEW] Used to add channels.

[CANCEL] Used to remove channels.

Quick Channel Load

The initial programming can be quickly restored or changed by entering Learn Mode with [SYS INFO] button then entering the appropriate code for the channel range / receiver desired from the table at right, (i.e. [903] for 30 channels (950-979) on a 2700 series receiver or [907] for 60 channels (920-979) on a 3000 series receiver) and again pressing the [SYS INFO] button.

Example: To program the Channel Controller for 60 channels on a 3000 series receiver:

Press [SYS_INFO], Enter [9][0][7], Press [SYS_INFO] again.

Done.

Entering Learn Mode (programming mode)

Point the remote toward the Controller and press the [SYS INFO] button.

The decimal points in the lower right corner of each digit will begin to flash in succession indicating that you've entered Learn Mode.

Adding A Channel

Point the remote toward the Controller and enter the channel number to be added (i.e. 950) and Press [VIEW].

The display will flash to acknowledge the command.

Repeat this process until all the channels have been entered.

Deleting A Channel

Point the remote at the Controller and enter the channel to be deleted (i.e. 951) then press [CANCEL]. The display will show [---] to indicate that the channel has been removed.

The [Up /Down Arrow] buttons may also be used to display the channel to be deleted. When the unwanted channel number is displayed press [CANCEL] to remove it.

Exiting Programming Mode

Point the remote toward the Controller and Press the [SYS INFO] button.

After a moment the display will briefly show the number of channels stored in memory then switch to the first available channel. The [Up / Down Arrow] buttons may now be used to review the available channels.

Key Sequence	Description
[SYS INFO]	Enters Programming Mode.
900 [SYS INFO]	Clears all channels from memory. 2700 Series receivers
901 [SYS INFO]	Clears all channels from memory. 3000 Series receivers
903 [SYS INFO]	30 Music channels (950 - 979) for 2700 Series receivers.
904 [SYS INFO]	30 Music Channel for 3000 Series receivers.
906 [SYS INFO] (Factory Default)	60 Music channels (920 - 979) 2700 Series receivers.
907 [SYS INFO]	60 Music channels 3000 Series receivers
911 [SYS INFO]	Performs self-test. Clears memory. Runs approximately 2 minutes

Addressing and Multiple Receiver Installations.

The Channel Controller may be programmed to respond to one of nine different addresses. This allows receivers to be stacked and the use of one remote to control all the receivers.

To make a Channel Controller addressable:

1. Press [SYS INFO] to enter Learn Mode.

2. Enter the digits [0] [2] and the desired address [1] - [9], i.e. [1] then press [VIEW].

NOTE: Entering the digits [0][2][0] and pressing [VIEW] makes the Channel Controller non-addressable (Factory Default).

3. Press [SYS INFO] again to exit Learn Mode.

IMPORANT: When the Channel controller is programmed with an address it will always power up and return from Learn Mode in a deselected state. In its deselected state the only remote commands that it will respond to are [INFO] to display the Channel Controller's assigned address and [VIEW] to display and change the currently selected Channel Controller.

In the above example, when the Channel Controller returns from Learn Mode it will not respond to commands. It is necessary to press [VIEW] [1] to make it active again. Once a Channel Controller has been selected or "made active" it will remain so until powered down, Learn Mode is exited or until it "sees" another Channel Controllers address selected.

Disabling Channel Refres h

In some situations it may be desirable to slow down or even turn off the rate at which the receiver's channel is refreshed.

To change the Channel Controller's Refresh Rate:

1. Press [SYS INFO] to enter Learn Mode.

2. Enter the digits [0] [3] and the number corresponding to the desired refresh rate, [0] - [9] then press [VIEW].

Rates: [0] = Off, [1] approx. once per day, [2] twice per day, up to [9] which is every six minutes (Factory Default).

3. Press [SYS INFO] again to exit Learn Mode.

Compensating for Slow Receivers

In some rare situations (generally older receivers) the Channel Controller can overrun the receivers ability to accept commands causing it to function abnormally. In these cases, turn ON Slow Receiver Mode to compensate:

1. Press [SYS INFO] to enter Learn Mode.

2. Enter the digits [0] [4] and [1] for Slow Receiver Mode ON or [0] for OFF (Factory Default), then press [VIEW].

3. Press [SYS INFO] again to exit Learn Mode.

Pass Thru Mode

It is sometimes necessary to access the receiver's menu functions. This may be done without removing the Channel Controller from the receiver by enabling Pass Thru Mode as follows.

1. Press [SYS INFO] to enter Learn Mode.

2. Enter the digits [0] [5] and [1] for Pass Thru Mode ON or [0] for OFF (Factory Default), then press [VIEW].

3. Press [SYS INFO] again to exit Learn Mode.

To use this mode press [MENU] and [CANCEL] in rapid succession; the Channel Controller will respond by displaying [- - -]. Every button pressed on the remote will now be passed thru to the receiver. To exit this mode press [SYS_INFO]. The Channel Controller will reset and resume normal operation.

Tips for Successful Installation.

To work correctly the only commands that the receiver gets should be coming from the Channel Controller, NOT the remote. Therefore it is important that the receiver's IR detector be properly masked. This is done with the black plastic mask and foam mounting tape assembly (supplied). It should be centered over the receiver's IR detector and the perimeter of the mask sealed against the receiver.

Receivers should always be loaded with all (60) music channels. By doing this and using the Channel Controller to restrict to available channels, receivers may be swapped by simply moving the Channel Controller to the new receiver, with no additional programming required.

Disable the Front Panel.

If the receiver you are using has front controls, disable them! This will ensure that no one can change channels (independently of the Channel Controller).

Interference

Some types of lighting (especially full spectrum lighting) and direct sunlight may interfere with the IR reception of the Channel Controller. If this is the case, functionality may be greatly improved by simply shading the Channel Controller's IR detector from direct illumination by the offending light source.

Day-Parting Receivers

Don't use this device with Day-Parting receivers. The Channel Controller will periodically reselect the receiver to its own channel number overriding the Day-Part.

Operation

On power up the Channel Controller performs a brief self-test, then momentarily displays the number of available channels, i.e. (60) in the default configuration. After that it will switch the receiver to the last channel select before it was powered down.

Direct Channel Entry

You may quickly go to any available channel by entering the (3) digit channel number. Upon entering the 3rd number the receiver will immediately be changed to the desired channel. Entering an unavailable channel number will cause display to flash briefly then return to the previously selected channel.

Fast Up / Down and Up / Down Channel

Using the [Up / Down Arrow] buttons allows you to scroll through all the available channels at high speed.

Using the [Left / Right Arrow] buttons allows scrolling through the channel list at more civilized pace. Pausing on the desired channel number or Pressing [SELECT] causes the Channel Controller to switch the receiver to that channel.

Recall

Pressing the [RECALL] button causes the Channel Controller to immediately change to the previously selected channel. The Channel Controller retains the "current" and "previous" channel information through power outages.

Select

The [SELECT] Button causes the Channel Controller to "reselect" the current channel; this can sometimes be useful if the receiver becomes stuck in some unknown state.

Cancel

When using the Arrows buttons to scroll through the channel list or entering channel numbers directly you may stay on the currently selected channel and abort the entry by pressing [CANCEL].

Channel Controller / Receiver Addressing

When the Channel Controllers are programmed for addressable operation the [INFO] and [VIEW] buttons may be used to see and or change the currently selected receiver.

Pressing [INFO] displays the address of each Channel Controller, the currently selected receiver's address will flash.

Pressing [VIEW] displays each Channel Controller's address and allows the user to select the receiver to activate by pressing its corresponding address [1] - [9].

Pressing [VIEW] and [0] deselects all Channel Controllers.