Avid
iNEWS ControlAir™
AirSPACE Device Manager Guide
1.1.0

This Device Manager Guide is intended to advise you of certain technical requirements and considerations that will affect your use of the AirSPACE Device Manager with Avid's iNEWS ControlAir system.

This guide covers the following general areas:

- **Installation**: the hardware and software needed to control an Avid AirSPACE with the ControlAir system
- **Configuration**: the configuration options needed to control how the AirSPACE DM and the AirSPACE behave
- **Operations**: notes on using the AirSPACE DM in a news production environment

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Installation

Hardware

In a typical setup, the AirSPACE Device Manager (AirSPACE DM) runs on the same computer as the ControlAir Server program. It can also run on a separate computer if necessary. Therefore, hardware requirements are identical to those used for the ControlAir Server. Refer to the *iNEWS ControlAir Installation and Operations Manual* for further details.

The AirSPACE DM connects to the AirSPACE via the network, unlike some other device managers that require serial connections. No additional cables to the AirSPACE are needed for playout control.
One or more GPI Remote Panels can be used to control AirSPACE playout as an alternative or an addition to using the ControlAir Workstation. If you want to use remote panel control and you installed GPI Remote Panel support when you installed ControlAir, then a digital I/O board is also required.

Note: The GPI Remote Panels are designed for sequential playout of a list of clips. They do not support taking clips out of order, as the Workstation does.

GPI Remote Panel (Maney Panel)

Avid Broadcast supports one of two styles of GPI Remote Panel for the AirSpaceDM. The first style controls 2 channels on the DM; the second style controls 4 channels on the DM. These panels are produced by maney-logic (http://maney-logic.com/) and are usually called *Maney Panels*. The Maney Panels connect to a digital I/O board installed in the computer that runs the AirSPACE DM. The PCI-DIO24 board from Measurement Computing has been qualified to work with ControlAir. The board ships with a CD containing drivers and an installation program.

To install the board:
1. Solder a 10-pin SIP 2.2 K pull-up resistor pack into the socket labeled Port A with the common end in the spot marked HI on the board. The common end of the SIP is the end with a “dot” or a “line” on it. This is usually on the left-hand side of the side with the writing.
2. Repeat Step 1 with Ports B and C.
3. Insert the CD and install the installation program, called InstaCal™.

Note: The installation program should start automatically, but if it doesn't, explore the CD and run the setup.exe *program.*

4. Shut down the computer, install the card and reboot.
5. The "Add New Hardware" wizard runs and asks for a location. Enter the drive letter of the CD drive. The wizard will install the drivers.
6. Run the InstaCal program and add the board as Board #1.

The cable that connects Maney Panels to the digital I/O board is described in the "Cabling" section.

Cabling

The cable layout between two 2-channel Maney Panels and the DIO24 card is shown below. For a full 12-channel setup using six 2-channel Maney Panels, see the "Twelve Channels" section in the Appendix. The "Twelve Channels" section also contains the cable layout for up to three 4-channel Maney Panels.

Panel 1
Channels A & B

DIO24 End DB-37 Female Plug		GPI Panel End DB-15 Female Plug	
A0	37	2	D0
A1	36	7	D1
A2	35	10	D2
A3	34	14	D3
G	19	4	G

Panel 2
Channels C & D

DIO24 End DB-37 Female Plug		GPI Panel End DB-15 Female Plug	
A4	33	2	D0
A5	32	7	D1
A6	31	10	D2
A7	30	14	D3
G	17	4	G

Tally Connection

Tally is connected to the Maney Panel through a DB-9 connector. The 2-channel Maney Panel has the DB-9 socket in the back, whereas the 4-channel Maney Panel has the DB-9 socket on the GPI card end of its attached cable. The pinouts are as follows:

Pin 1: 24V input for Channel A

Pin 2: 24V input for Channel B

Pin 5: Common (Ground)

Tally is active with +24V on Pin 1 or Pin 2, with respect to Pin 5. The Tally inputs on the DB-9 connector are opto-isolated and have no relation to the keyboard's power or ground.

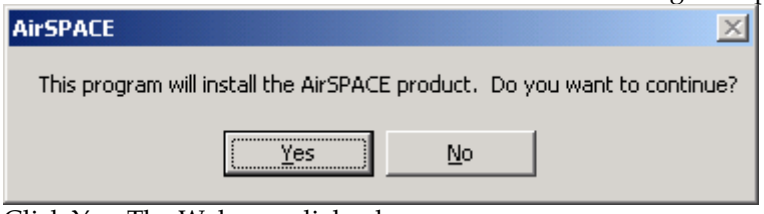
Pin 1 and Pin 2 inputs are connected to the anode of opto couples through 1500 ohm – 1/2 watt resistors. A valid Tally event is a 24V signal (~10 mA) held on the opto coupler for at least 50ms, and then OFF for 50ms. The Tally-controlled Auto-abort button "state" is checked before the abort code is issued.

Software Installation

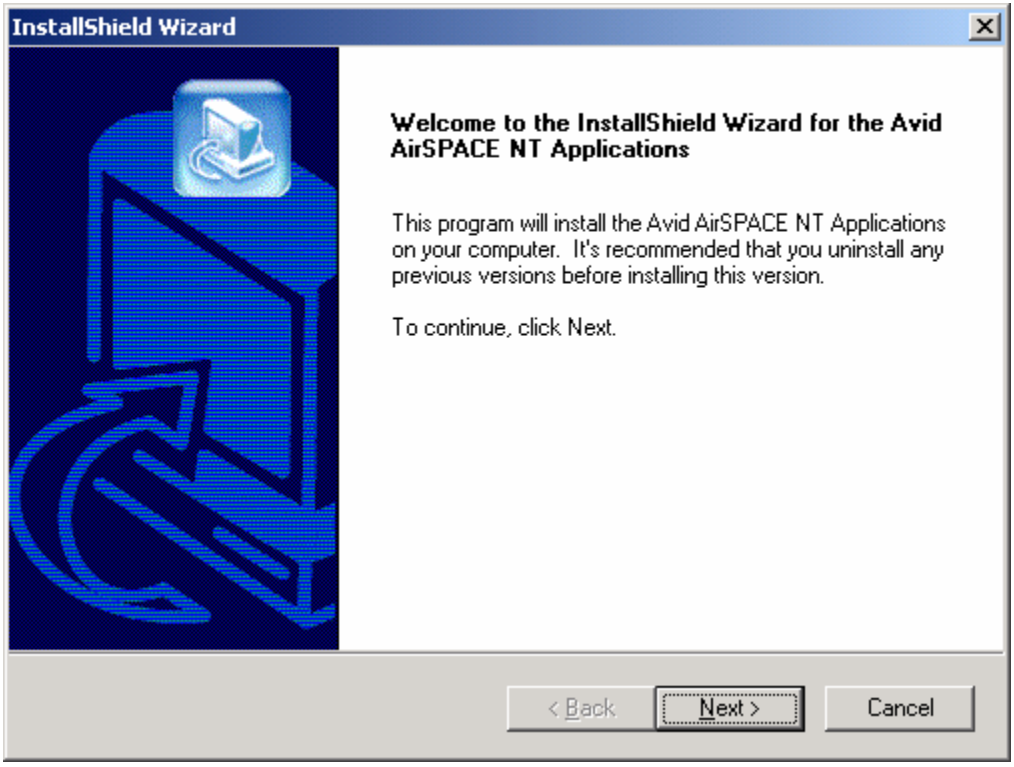
See the *ControlAir 1.1 Release Notes* for the list of AirSPACE versions. on which the AirSPACE DM has been qualified.

Before the AirSPACE DM can be installed, some of the AirSPACE software must be installed. Here are the steps for that installation:

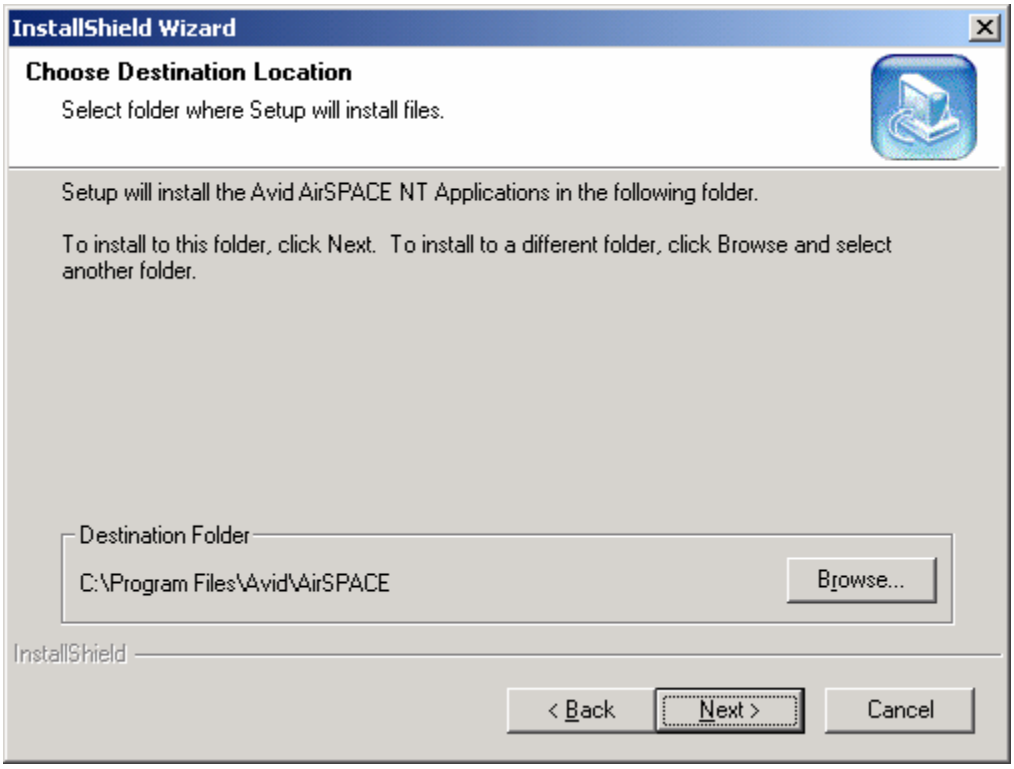
1. Run the Avid AirSPACE install set. The AirSPACE dialog box appears.



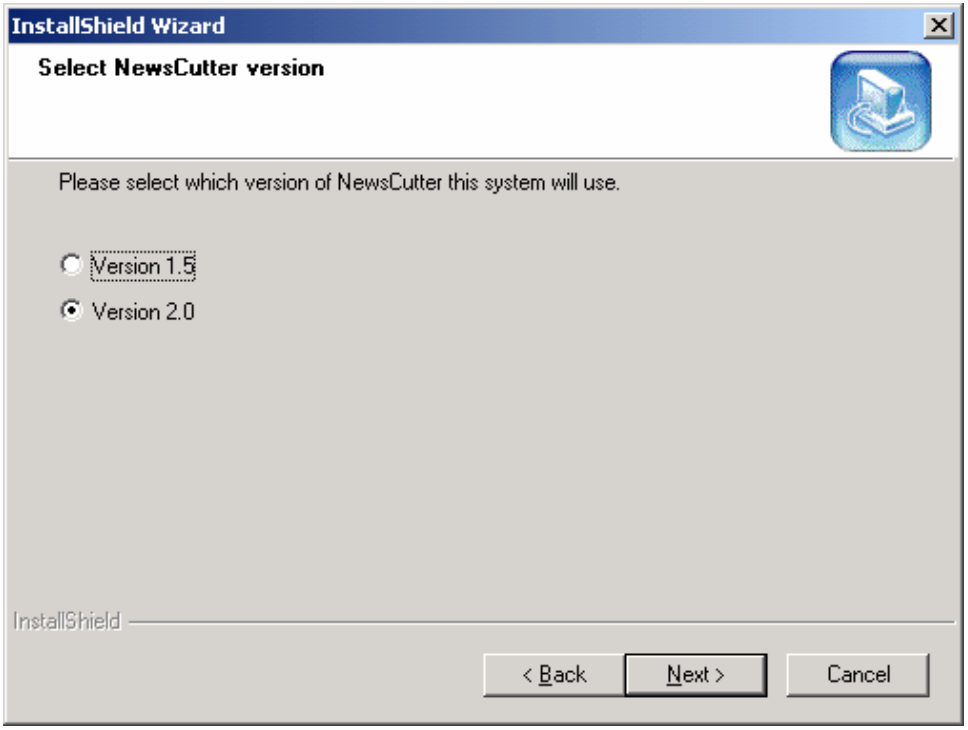
2. Click Yes. The Welcome dialog box appears.


InstallShield Wizard
Welcome to the InstallShield Wizard for the Avid AirSPACE NT Applications
This program will install the Avid AirSPACE NT Applications on your computer. It's recommended that you uninstall any previous versions before installing this version.
To continue, click Next.
< Back
Next >
Cancel

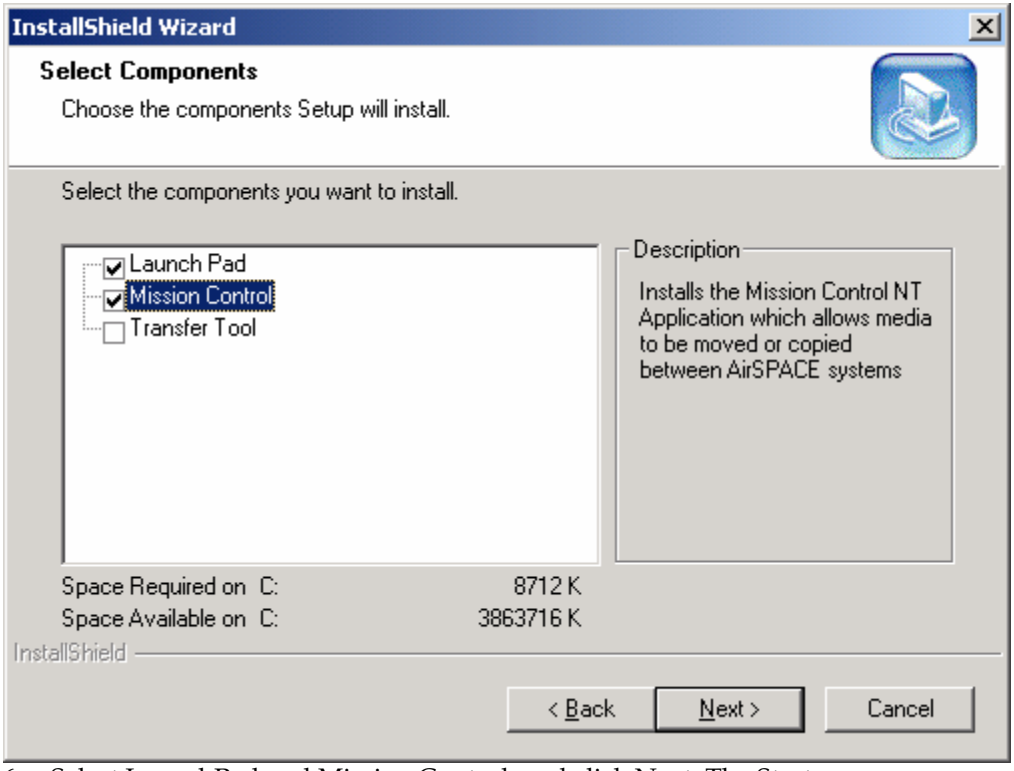
3. Click Next. The Choose Destination Location dialog box appears.



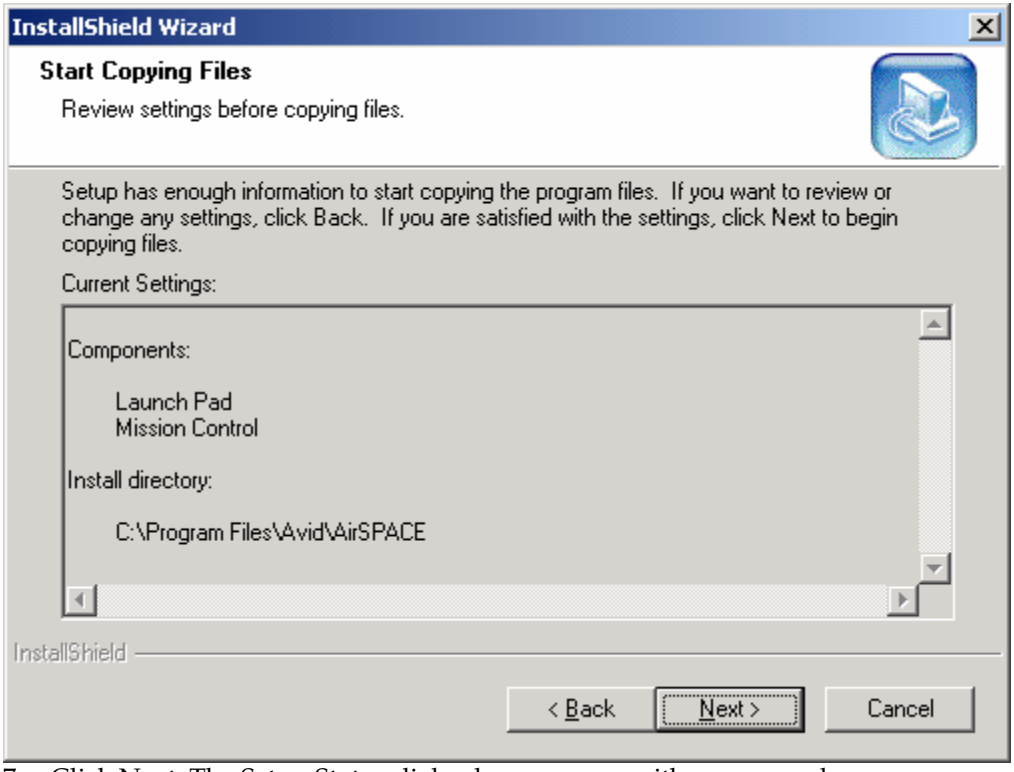
4. Click Next to accept the default setting for the Destination Folder or click Browse to set another drive and directory as the destination. The Select NewsCutter version dialog box appears.



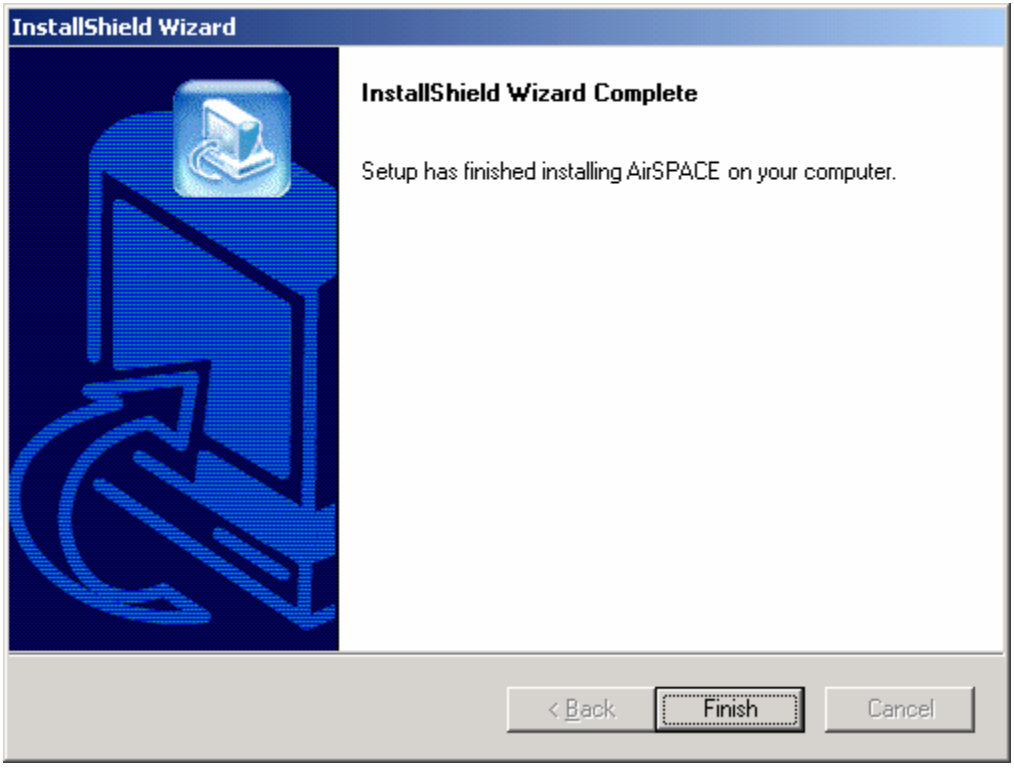
5. Choose Version 2.0 and click Next. The Select Components dialog box appears.



6. Select LaunchPad and Mission Control, and click Next. The Start Copying Files dialog box appears.



7. Click Next. The Setup Status dialog box appears, with a progress bar indicating the percentage of the install completed. When the InstallShield Wizard Complete dialog box appears indicating the successful completion of the install, click Finish.


InstallShield Wizard
InstallShield Wizard Complete
Setup has finished installing AirSPACE on your computer.
< Back
Finish
Cancel

Configuration

This section describes how to configure the AirSPACE DM and the AirSPACE.

Configuration File

All device manager configuration files are called Device Manager Profile (DMP) files, and have a `.dmp` file extension. There are five sections to an AirSPACE DM configuration file:

- `[Configuration]`
- `[Shows]`
- `[Channels]`
- `[GPIs]`
- `[VideoServers]`

Each section starts with its name in square brackets and contains lines of the form *Keyword=Value*. The following sections describe each keyword available in each section, with a description following it.

`[Configuration]`

The `[Configuration]` section contains general configuration for the AirSPACE DM. There are four required keywords:

- `DeviceName`
- `SvrHostName`
- `NumberOfChannels`
- `LogFileDirectory`

All other keywords are optional, with default values if they are not specified.

`DeviceName=`**`DEVICE_NAME`**
This keyword is required. The `DeviceName` keyword specifies the name that the AirSPACE DM reports to ControlAir Server. It appears in ControlAir Workstation and must match the name of the video device used in production cues. Replace **`DEVICE_NAME`** with the iNEWS device name.

`SvrHostName=`**`SERVER_HOST_NAME`**
This keyword is required. The `SvrHostName` keyword specifies the host name of the computer running the ControlAir Server. This is the server that the AirSPACE DM connects to when it is started.

`NumberOfChannels=`**`CHANNEL_COUNT`**

This keyword is required. The `NumberOfChannels` keyword specifies the total number of channels the AirSPACE DM controls. Replace **`CHANNEL_COUNT`** with a number between 1 and 16.

`FrameRate=`**`FRAME_RATE`**
The `FrameRate` keyword specifies the frame rate of the AirSPACE. Replace **`FRAME_RATE`** with one of the words "NTSC," "PAL," or "NTSC_DROPFRAME." If the keyword is not specified, the DM will use a default value of NTSC. For details about the different television standards, refer to the "Television Video Standards" section.

`DisableAutoCue=`**`Yes_No`**
The `DisableAutoCue` keyword specifies whether the AirSPACE DM auto-cues the next video clip on a channel when the playing clip on that channel ends or is stopped. If **`Yes_No`** is set to Yes, then the AirSPACE DM does not auto-cue clips. If **`Yes_No`** is set to No, the AirSPACE DM will auto-cue clips. If the keyword is not specified, the default value is No.

`AutoCueDelay=`**`HOW_MANY_SECONDS`**
The `AutoCueDelay` keyword specifies how many seconds the AirSPACE DM waits after the end of a playing clip before it auto-cues the next clip on that channel. Replace **`HOW_MANY_SECONDS`** with the number of seconds it should wait. If `DisableAutoCue` is set to Yes, this keyword is ignored. If the keyword is not specified, the default value is 0, which means that the next clip will be cued immediately.

`AutocueOtherChannelsOnPlay=`**`Yes_No`**
The `AutocueOtherChannelsOnPlay` keyword specifies whether the AirSPACE DM auto-cues the next clip on every channel when a clip is played on one channel. If **`Yes_No`** is set to Yes, then the AirSPACE DM un-cues any auto-cued clips above the played clip, and auto-cue the next clip on each channel below the played clip. If **`Yes_No`** is set to No, the AirSPACE DM only auto-cues the next clip on the playing channel, leaving auto-cued clips on other channels unaffected. Sites using only the Maney Panel for on-air control should set the keyword to No. If the keyword is not specified, the default value is Yes.

Logging
`LogFileDirectory=`**`DIRECTORY_NAME`**
This keyword is required. The `LogFileDirectory` keyword specifies the directory in which log files are created. Replace **`DIRECTORY_NAME`** with a path to the directory. An example is `C:\AirSpaceDMLogs`.

WARNING: If more than one instance of the AirSPACE DM is running on the same computer, they must use different log file directories.

`NumberOfLogFiles=`**`FILE_COUNT`**
The `NumberOfLogFiles` keyword specifies the maximum number of log files that are created. Replace **`FILE_COUNT`** with a number between 1 and 999. The default number of log files is 50.

`StartLoggingOnProgramStart=`**`Yes_No`**
The `StartLoggingOnProgramStart` keyword specifies whether the AirSPACE DM starts logging immediately at startup, or should wait until the user explicitly starts logging with the Logging / Start Logging menu option. Replace **`Yes_No`** with Yes or No. The default is Yes, which starts logging immediately.

Diagnostic Messages
The following keywords determine which types of diagnostic messages the AirSPACE DM reports, and at what level of detail. The diagnostic message keywords come in pairs: Report*messagetype* and Report*messagetype*Details, each requiring a Yes or No. The first keyword specifies that the AirSPACE DM report general messages of the chosen type. The second keyword specifies that the AirSPACE DM report more detailed messages in addition to the general messages of the chosen type. To specify Yes on a “details" keyword, you must also specify Yes on the "general" keyword for that message type. If none of the keywords is specified, the defaults are as follows:

```
ReportOnAirControl=Yes
ReportPlaylistManagement=Yes
ReportErrors=Yes
All others=No
```

```
ReportOnAirControl=Yes
ReportOnAirControlDetails=Yes
```

OnAirControl messages occur whenever a Play, Stop, Cue, Pause, or Channel Change command is received from ControlAir Workstation.

```
ReportPlaylistManagement=Yes
ReportPlaylistManagementDetails=No
```

PlaylistManagement messages occur whenever an event or story is added to, deleted from, or moved in the playlist.

```
ReportEventStatusChange=No
ReportEventStatusChangeDetails=No
```

EventStatusChange messages describe changes in the status of individual events.

```
ReportDeviceStatusChange=No
ReportDeviceStatusChangeDetails=No
```

DeviceStatusChange messages describe changes in the status of the AirSPACE being controlled by the device manager.

```
ReportErrors=Yes
ReportErrorDetails=No
```

Error messages describe situations where the device manager could not perform an action or a status changed unpredictably.

```
ReportDeviceCommunication=Yes
ReportDeviceCommunicationDetails=No
```

Device communication messages provide more detail about how the device manager is communicating with the AirSPACE. They appear only in the log file.

```
ReportGPIActions=Yes
ReportGPIActionsDetails=No
```

GPI action messages describe which GPI buttons are getting pushed and when the action is processed. They appear only in the log file.

Miscellaneous

`CueReplacesPlayingEvent=`**`Yes_No`**

The `CueReplacesPlayingEvent` keyword specifies whether the DM will stop any playing event on a channel when the user makes a Cue request on that channel. If the keyword is set to Yes, a Cue request stops the currently playing event on that channel and cue the new event. If the keyword is set to No, a Cue request puts the new event into Standby status until the playing event ends, at which point the new event is cued. If the keyword is not specified, the default value is No.

`ChannelPollInterval=`**`HOW_MANY_SECONDS`**
The `ChannelPollInterval` keyword specifies how often the AirSPACE DM checks to see if any channels that are offline can be brought back online. If the keyword is not specified, the default is 10 seconds.

`ConnectServerInterval=`**`HOW_MANY_SECONDS`**
If the AirSPACE DM starts before CASvr does, it will retry the connection at regular intervals. The `ConnectServerInterval` keyword specifies how long the interval is. If the keyword is not specified, the default is 5 seconds.

`[Shows]`

The `[Shows]` section allows the system administrator to set up default prefixes for the names of clips in various shows. The AirSPACE has no directory structure for storing its clips; all clips are in a single "bin." Users may wish to separate the clips by specifying a common prefix for clips of a certain type. For instance, a clip for the 10PM show might be named "10PM.Fire," while a similar clip in the noon show might be named "12PM.Fire." The system administrator can configure the AirSPACE DM with specific prefixes for specific shows. Any show for which a default prefix is desired is specified in the `[Shows]` section with a line of the following form:

`Show`**`INDEX=SHOW_PATH:PREFIX`**

- INDEX is a number 1, 2, 3, …
- SHOW_PATH is the fully qualified path of the rundown queue in iNEWS
- PREFIX is the desired prefix

Here are two examples of how a user specifies a clip. The `[Shows]` section contains two lines:

```
Show1=SHOW.10PM.RUNDOWN:10p
Show2=SHOW.12PM.RUNDOWN:12n
```

The AirSPACE contains five clips: 10p.Fire, 10p.Barn, 12n.Fire, 9p.Barn, Fire. A user can refer to the various clips in the 10PM and 12PM shows as follows:

- The clips 10p.Fire and 10p.Barn can be entered as Fire and Barn, respectively, in the 10PM show
- The clip 12n.Fire can be entered as Fire in the 12PM show
- The clip 9p.Barn must be entered as 9p.Barn in either show
- The clip Fire will not be found by the AirSPACE DM in either show

Additionally, the 10p clips can be entered as 10p.Fire and 10p.Barn into any show, and the AirSPACE DM will find them and play the right clip.

This section can also be left empty if the user always wants to refer to clips by their full names. The section must be present in the DMP file even if it is empty.

[Channels]

The [Channels] section maps each channel controlled by the AirSPACE DM to an AirSPACE channel. It maps the channel index used by iNEWS to the channel and allows the user to specify a name that is displayed in ControlAir Workstation.

A channel is specified by a line in the following format:

```
Chan iNEWS_Channel=Name:Video_Server:Channel_Name
```

- **iNEWS_Channel** is a number (1, 2, 3...); this is the channel number used by iNEWS.
- **Name** is a string containing anything but a colon; this is the name of the channel displayed in ControlAir Workstation.
- **Video_Server** is the hostname of the AirSPACE to be controlled.
- **Channel_Name** is the name of the channel on that AirSPACE that will be controlled.

Examples:

```
Chan1=A__:AirSp1:Channel 1
Chan2=_B_:AirSp1:Channel 3
Chan3=__C:AirSp2:Channel 1
```

Note: For the AirSPACE DM to control Rec/Mon channels, the channel numbers must be odd numbers. If the AirSPACE DM controls Rec/Playlist channels, the channel numbers must be even numbers. For example, the first I/O board in the AirSPACE will be Channel 1 if it is configured Rec/Mon, and Channel 2 if configured Rec/Playlist.

[GPIs]

For each channel, the [GPIs] section maps the buttons for that channel on a Maney Panel to the four actions (Play, Recue, Pause, Abort) available on that channel. Each channel and its associated action are specified by a line in the following format:

```
Button_Name=Button_Code:Button_Mask
```

- **Button_Name** is made up of the action and the channel index; for instance, Play1 is the Play action on Channel 1.

- **Button_Code** is the code for that particular button; all are specified in the Appendix.
- **Button_Mask** is the mask specifying which bits to inspect; all are specified in the "Twelve Channels" section of the Appendix.

The following is the setup for two 2-channel Maney Panels. See the "Twelve Channels" section for configuration of up to six 2-channel Maney Panels.

```
Play1=  08:0F
Recue1= 04:0F
Freeze1=02:0F
Abort1= 01:0F

Play2=  07:0F
Recue2= 0B:0F
Freeze2=0D:0F
Abort2= 0E:0F

Play3=  80:F0
Recue3= 40:F0
Freeze3=20:F0
Abort3= 10:F0

Play4=  70:F0
Recue4= B0:F0
Freeze4=D0:F0
Abort4= E0:F0
```

For 4-channel Maney Panels, the [GPIs] section has a different set of **Button_Mask** values. All the values can be found in the Twelve Channels section. The following is for a single 4-channel panel.

```
Play1=  18:1F
Recue1= 14:1F
Freeze1=12:1F
Abort1= 11:1F

Play2=  17:1F
Recue2= 1B:1F
Freeze2=1D:1F
Abort2= 1E:1F

Play3=  08:1F
```

```
Recue3= 04:1F
Freeze3=02:1F
Abort3= 01:1F

Play4=  07:1F
Recue4= 0B:1F
Freeze4=0D:1F
Abort4= 0E:1F
```

`GpiPlayNextEnabled=`**`Yes_No`**
The GPI Play button can have one of two behaviors. In the default behavior (when `GpiPlayNextEnabled` is set to No), pressing the GPI Play button on a channel with a playing clip has no effect. When `GpiPlayNextEnabled` is set to Yes, the GPI Play button will act like a "Play Next" button if a clip is already playing on the channel. That is, the playing clip stops and the clip in standby on the channel starts playing. If there is no standby clip in this case, the GPI Play button has no effect.

`[VideoServers]`

The AirSPACE DM can control multiple AirSPACEs simultaneously. The `[VideoServers]` section names the AirSPACEs being controlled and specifies the channels on each AirSPACE. Each video server is specified by a line in the following format:

`Server`**`INDEX`**`=`**`NAME`**`:Chan`**`N1`**`:Chan`**`N2`**`:...`

- **`INDEX`** is a number 1, 2, 3…
- **`NAME`** is the hostname of the video server
- **`N1`**, **`N2`**, ... are the numbers from the `[Channels]` section that indicate the channels on that machine

Examples:

```
Server1=AirSp1:Chan1:Chan2
Server2=AirSp2:Chan3
```

Device Setup

To configure the Avid AirSPACE to be controlled by the AirSPACE DM, you must set up the controllers for each channel. The following steps explain how to do this.

Note: Do not do this while any channel is on-air; you will take it off-air.

1. Start the AirSPACE GUI if it is not already running.

2. Choose Controller Setup from the Menu Select Button (lower left in GUI).
3. Set Controllers to Record/Playlist for the controller that will be driven by The AirSPACE DM.
4. Set Controller Protocol to None.
5. Click OK to save settings.
6. Click Yes when you see the message “Changing Controllers will cause All Streams to Stop!”
7. Choose Controls from the Menu Select Button (lower left in GUI).

Operations

The AirSPACE DM can be controlled from ControlAir Workstation in the same way that all other device managers are controlled. Refer to the *iNEWS ControlAir 1.1.0 User Manual* for more details.

The AirSPACE DM also supports sequential playback via GPI input. The following section describes the two styles of Maney Panel and their behavior.

2-Channel Maney Panel for Playback

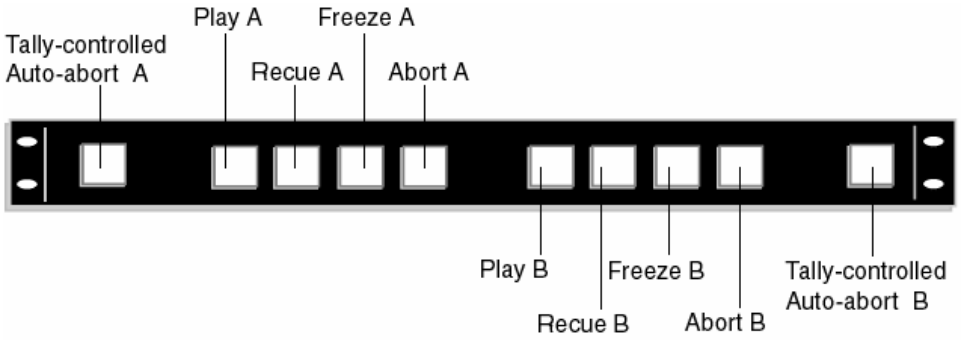


Figure 1 – A 2-channel Maney Panel

The 2-channel Maney Panel has 10 buttons on the front. The first button on the left is an Enable for the Tally-controlled Auto-abort feature for Channel A, and the last button on the right is the Tally-controlled Auto-abort feature for Channel B. Auto-abort is enabled if the button is *depressed*. If a second Control panel is used, Channels C and D would have the same setup as Channels A and B, respectively.

Each set of four buttons controls a single channel. The left set controls Channel A and the right set controls Channel B. The buttons perform the Play, Recue, Freeze, and Abort actions, respectively. These are very similar to the Play, Cue, Pause and Stop keys available on the ControlAir Workstation. However, they have slightly different behaviors.

- The Play button starts playing the clip cued on the specified channel. This is the next clip assigned to the channel after the last played clip. Because it is designed for sequential play, it does not play the event under the cursor as the Workstation Play key does.

  For a description of what happens when the Play button is pressed while a clip is playing on the channel, see the description of the keyword GpiPlayNextEnabled in the `[Configuration]` section.

- The Recue button stops the current playing or paused clip on the specified channel and recues it for Play again. If there is no playing or paused clip, this button does nothing. This is different from the Workstation Cue key, which merely cues the clip under the cursor. The Recue button is not affected by the CueReplacesPlayingEvent keyword, while the Workstation Cue key is affected by it.

- The Freeze button pauses the currently playing clip on the specified channel. If there is no playing clip, this button does nothing. To start the clip rolling again from its paused position, you must press the Play button. This is different from the Workstation Pause key, which works as a toggle; pressing the Pause key again will start the clip rolling again, as will the Play key.

- The Abort button stops the currently playing clip on the specified channel. If there is no playing clip, this button does nothing. This is different from the Workstation Stop key, which can also uncue a manually cued clip to let the DM auto-cue a clip.

The typical workflow for Maney Panel control is to press the Play button to start a clip, then either let it run out or press the Abort key to stop it. If the operator wants to preview a clip, she would press the Play button followed by the Recue button. If the operator wants to skip the currently cued clip, she would press the Play button followed quickly by the Abort button to advance to the next event.

The Play, Recue, Freeze, and Abort buttons are always lit. They are controlled by the panel's microprocessor. The two Tally-controlled Auto-abort buttons are mechanically latching switches, and the LEDs for these keys are controlled by the microprocessor. If the Tally-controlled Auto-abort button is unpressed, the LED is OFF, indicating auto-abort is not enabled. If the Tally-controlled Auto-abort button is pressed, the LED is ON, indicating auto-abort is enabled.

Note: An output code is not sent when simply toggling the Tally-controlled Auto-abort button. Only the panel is aware of the button's state, and the LED displays the correct status. A valid tally event (if enabled) is reported exactly the same as a valid button command. No output code is sent if a valid tally event is detected when the Tally-controlled Auto-abort button is OFF.

When you press any Play, Recue, Freeze, or Abort button, the Tally-controlled Auto-abort LED switches to its reverse state for 1/4 second to indicate a valid command. If the Tally-controlled Auto-abort button's LED does not toggle, a valid command was not detected and an output code will not be sent. If you press a button and the enable light toggles for 1 second, an invalid button combination was detected and code was not sent. Two buttons pressed simultaneously for a single channel results in an invalid command.

4-Channel Maney Panel for Playback

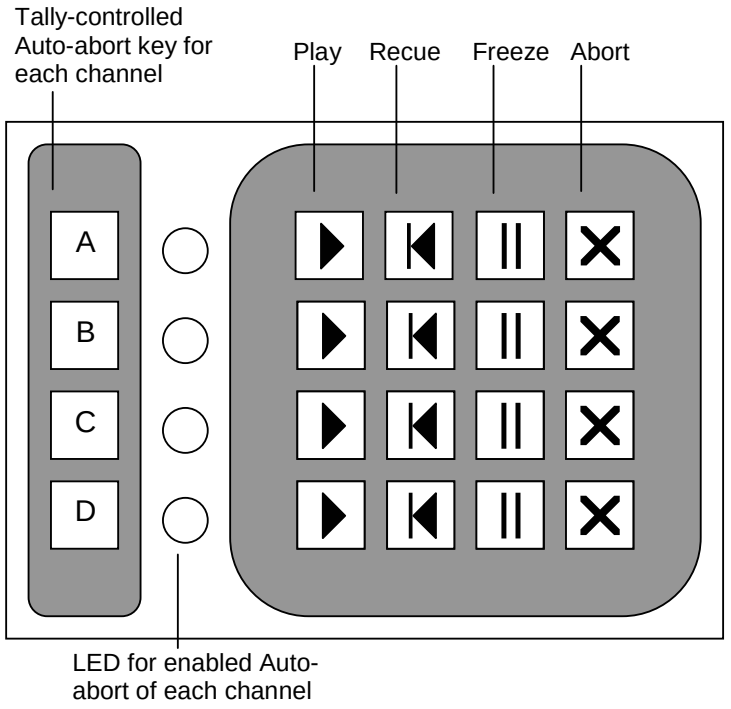


Figure 2 – A 4-channel Maney Panel

The 4-channel Maney Panel (refer to Figure 2) has 20 buttons on the front. The buttons labeled A, B, C, and D are for enabling the Tally-controlled Auto-abort feature for each respective channel. Auto-abort is enabled if the LED beside the button is lit.

The buttons perform the following actions:

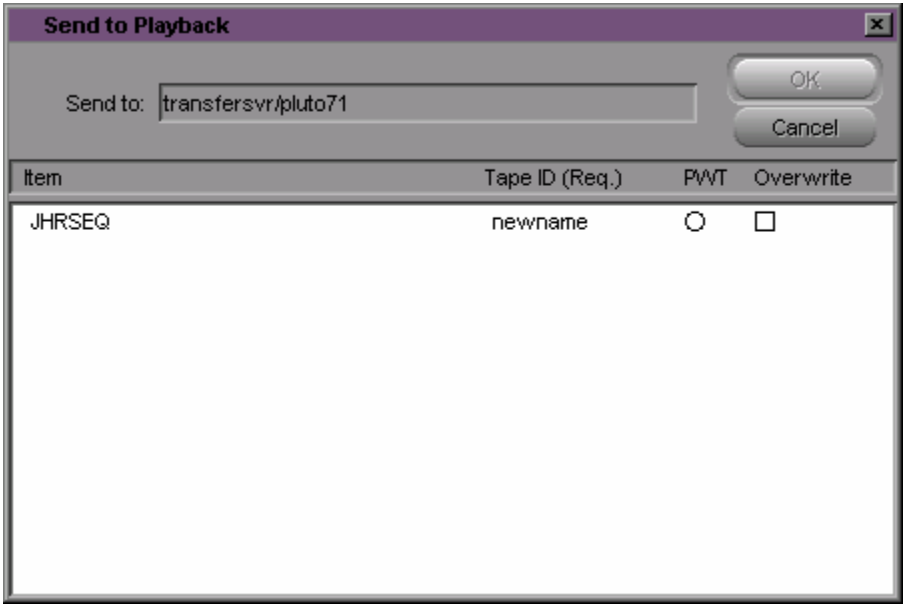
Enable	(LED)	Play	Recue	Pause	Abort
Enable	(LED)	Play	Recue	Pause	Abort
Enable	(LED)	Play	Recue	Pause	Abort
Enable	(LED)	Play	Recue	Pause	Abort

For their behavior, refer to the descriptions of Play, Recue, Pause, and Abort, respectively, in the 2-channel panel description.

Playing a Transferring Clip

The AirSPACE DM differs from other video DMs when it comes to playing a clip that is streamed to the AirSPACE. In the other video DMs, this ability can be enabled or disabled. If it is disabled, a transferring clip will not be available to play until the transfer finishes. The AirSPACE does not indicate when a clip is being transferred to it. Consequently, the AirSPACE DM cannot keep a clip unavailable until the transfer finishes, and will always allow the user to play a clip that is being transferred.

To disable this feature, you must ensure that any transfer of a clip to the AirSPACE is not a streaming transfer. In Avid NewsCutter, this is done by ensuring that the PWT radio button on the Send to Playback dialog box is clear.



Error Handling

This section lists the AirSPACE DM error messages in alphabetical order. Each error message is followed by its location, a category, a description of the problem and, if appropriate, steps to take to resolve it.

The possible categories are:

- Configuration errors - setting up the DMP file correctly
- Run-time errors

Words in *italics* in the error message descriptions below indicate where actual values appear in the actual error message. For example, a screen message "Cue of event 'Fire' failed on channel 'A' " matches the error description "Cue of event '*eventname*' failed on channel '*channelname*'."

Error: <<<Received Msg -- Message Type = *value* - NOT TRAPPED
Location: DM log file or screen
Category: Run-time
Action: The DM received a message from ControlAir Server that it cannot handle. It will ignore it and continue processing. If this happens frequently, it is likely that there is data being lost between the ControlAir Server and the DM.

Error: Can't establish connection to any channel. Good Bye!
Location: DM log file or screen
Category: Configuration
Action: The DM cannot connect to any specified channel. Check the DMP file and the AirSPACE GUI to ensure everything is correctly configured.

Error: Can't establish connection to the server. Good Bye!
Location: DM log file or screen
Category: Configuration
Action: The DM cannot connect to the ControlAir Server. Check that the correct host name is specified in the DMP file and that the ControlAir Server is running. Then restart the DM.

Error: Can't Initialize GPI board: *number* for Control Panel
Location: DM log file or screen
Category: Configuration
Action: The DM cannot connect to the GPI board used for the Maney Panels. Check that the board is correctly installed and calibrated (using the InstaCal program). Then restart the DM.

Error: Cue of event '*eventname*' failed on channel '*channelname*'
Location: DM log file or screen
Category: Run-time
Action: A clip named *eventname* that the user tried to cue could not be cued. Check the AirSPACE GUI to verify that it is set to Remote control, not Local control.

Error: DEVICE: Channel *name* is back online
Location: DM log file or screen
Category: Run-time
Action: The channel named *name* was offline but has been brought back online. No further action is required from the user.

Error: ERROR: At least one thread used for channel control failed to start
Location: DM log file or screen
Category: Run-time
Action: The DM could not start all the threads it needs to control the AirSPACE. This is an engineering issue; contact customer service.

Error: ERROR: Channel #*channelname* is not assigned to any video server in the [VideoServers] section of the profile file.
Location: DM log file or screen
Category: Configuration
Action: Every channel must be assigned to some video server. Modify the DMP file to ensure that each channel in the `[Channels]` section also appears in the `[VideoServers]` section.

Error: Error Connecting to Channel :*channelname*
Location: DM log file or screen
Category: Configuration
Action: The DM could not connect to the specified channel. Check the DMP file and the AirSPACE GUI to ensure everything is correctly configured.

Error: Error getting duration from device
Location: DM log file or screen
Category: Run-time
Action: The DM could not determine a clip's duration. Check the AirSPACE GUI to ensure that the DM is connected and the AirSPACE is in a correct state.

Error: Error getting position
Location: DM log file or screen
Category: Run-time
Action: The DM could not determine the amount of time remaining on a playing clip. Check the AirSPACE to ensure that the DM is connected and the AirSPACE is in a correct state.

Error: ERROR: Invalid channel 'Chan*X*' specified on line '<line>' of the [VideoServers] section of the profile file. There are only *Y* channels.
Location: DM log file or screen
Category: Configuration
Action: The channel number *X* must be between 1 and *Y*, inclusive. Modify the DMP file to ensure that each channel in the `[VideoServers]` section appears in the `[Channels]` section.

Error: ERROR: Line '*line*' in the [VideoServers] section of the profile file contains no video server name.
Location: DM log file or screen
Category: Configuration
Action: Modify the DMP file to ensure that each line in the `[VideoServers]` section contains a video servername.

Error: ERROR: Line '*line*' in the [VideoServers] section of the profile file has a bad channel specification: *channelspec* (should be of the form "ChanX").
Location: DM log file or screen
Category: Configuration
Action: A channel is specified by a string of the form "ChanX", where X is a number. Modify the DMP file to ensure that each channel in the `[VideoServers]` section appears in the `[Channels]` section.

Error: ERROR: Line '*line*' in the [VideoServers] section of the profile file has no channels specified.
Location: DM log file or screen
Category: Configuration
Action: Modify the DMP file to ensure that at least one channel is specified for each video server.

Error: Error reading Configuration section of profile file
Location: DM log file or screen
Category: Configuration
Action: The DM could not read the `[Configuration]` section of the DMP file. Modify the DMP file to ensure that the syntax is correct.

Error: Error reading VideoServers section of profile file
Location: DM log file or screen
Category: Configuration
Action: The DM could not read the `[VideoServers]` section of the DMP file. Modify the DMP file to ensure that the syntax is correct.

Error: ERROR: The profile file does not contain a [VideoServers] section.
Location: DM log file or screen
Category: Configuration
Action: Modify the DMP file to ensure that is contains a `[VideoServers]` section.

Error: Event failed to play.
Location: DM log file or screen
Category: Run-time
Action: The DM was unable to play an event the user tried to play. Check the AirSPACE to verify that it is in a state that allows playing by a remote application.

Error: EVT_STATUS: The clip '*clipname*' on the video server '*servername*' is now safe to play.
Location: DM log file or screen
Category: Run-time
Action: The DM has detected that a clip that was transferring to the video server has finished transferring. The user need not take any action.

Error: EVT_STATUS: The clip '*clipname*' on the video server '*servername*' may not be safe to play.
Location: DM log file or screen
Category: Run-time
Action: The DM has detected that the clip is transferring to the video server and is not completely present. Playing it may yield unpredictable results. The user need not take any action.

Error: Invalid channel assignment.
Location: DM log file or screen
Category: Run-time
Action: The DM received a Play command for an event with a bad channel assignment. Correct the channel assignment (either in ControlAir Workstation or in iNEWS) and try again.

Error: Missing channel configuration. Check profile...
Location: DM log file or screen
Category: Configuration
Action: The `[Channels]` section of the DMP file is missing. Modify the DMP file to ensure that it contains a `[Channels]` section.

Error: Missing ControlAir host name. Check profile...
Location: DM log file or screen
Category: Configuration
Action: The `[Configuration]` section of the DMP file does not specify the computer running the ControlAir Server software. Add the line "SvrHostName=*hostname*" to the `[Configuration]` section of the DMP file, where *hostname* is the name of the computer running the ControlAir Server software.

Error: Missing device name. Check profile...
Location: DM log file or screen
Category: Configuration
Action: The `[Configuration]` section of the DMP file does not specify the device name. Add the line "DeviceName=*devicename*" to the `[Configuration]` section of the DMP file, where *devicename* is the desired name for the DM.

Error: Missing number of channels. Check profile...
Location: DM log file or screen
Category: Configuration
Action: The DMP file does not specify how many channels the device has. Add the line "NumberOfChannels=*numberofchannels*" to the `[Configuration]` section of the DMP file, where *numberofchannels* is a number.

Error: The detail diagnostic keyword 'Report*messagetype*Details' cannot be set to Yes unless the general diagnostic keyword 'Report*messagetype*' is also set to Yes.
Location: DM log file or screen
Category: Configuration
Action: In order to have details on a message type reported, the user must tell the program to report the message type, as well as its details. Add the line "Report*messagetype*=Yes" to the DMP file. If the line already exists, check that the value after the equal sign is Yes.

Error: The profile file must specify a log file directory using the LogFileDirectory keyword.
Location: DM log file or screen
Category: Configuration
Action: Add the line "LogFileDirectory=*directory*" to the `[Configuration]` section of the DMP file, where *directory* is a path where the log files will be stored.

Television Video Standards

The values available for the keyword FrameRate in the DMP file are based on the television and video standards required for a specific geographic location. See the FrameRate description in the "Configuration File" section for more information. The standards refer to frame refresh rates per second. Choices for ControlAir are based on the following standards:

- NTSC
- PAL

NTSC is an abbreviation for the National Television Standards Committee. The NTSC committee is responsible for setting television and video standards in the United States. The NTSC standard for television defines a composite video signal with a refresh rate of 60 half-frames (interlaced) per second. Each frame contains 525 lines and can contain 16 million different colors.

The NTSC standard is incompatible with most computer video standards, which generally use RGB video signals. Special video adapters can be inserted into your computer that convert NTSC signals into computer video signals and vice versa.

NTSC locations include: USA, Antigua, Bahamas, Barbados, Belize, Bermuda, Bolivia, Burma, Canada, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Greenland, Guam, Guatemala, Guyana, Honduras, Jamaica, Japan, South Korea, Mexico, Netherlands Antilles, Nicaragua, Panama, Peru, Philippines, Puerto Rico, St. Vincent & the Grenadines, St. Kitts, Saipan, Samoa, Surinam, Taiwan, Tobago, Trinidad, Venezuela, and the Virgin Islands.

PAL is an abbreviation for Phase Alternating Line, the dominant television standard in Europe. PAL delivers 625 lines at 50 half-frames per second. Many video adapters that enable computer monitors to be used as television screens support both NTSC and PAL signals.

PAL locations include: Afghanistan, Algeria, Argentina (PAL-N), Australia, Austria, Bahrain, Bangladesh, Belgium, Brunei, Cameroon, Canary Islands, China, Cyprus, Denmark, Finland, Germany, Ghana, Gibraltar, Greece (also SECAM), Hong Kong, Iceland, India, Indonesia, Ireland, Israel, Italy, Jordan, Kenya, North Korea, Kuwait, Liberia, Luxembourg (also SECAM), Madeira, New Zealand, Nigeria, Norway, Oman, Pakistan, Paraguay (PAL-N), Portugal, Qatar, Saudi Arabia (also SECAM), Sierra Leone, Singapore, South Africa, Spain, Sri Lanka, Sudan, Swaziland, Tanzania, Thailand, Turkey, Uganda, United Arab Emirates, United Kingdom, Uruguay (PAL-N), Yemen (the former Yemen Arab Republic was PAL, and the former People's Democratic Republic of Yemen was NTSC), Yugoslavia, Zambia, and Zimbabwe.

Appendix

Twelve Channels

This section describes the cabling requirement for controlling an AirSPACE DM with up to 12 channels. The cabling is described for both 2-channel and 4-channel Maney Panels. If you want to use more than four or less than twelve channels, you must use either all 2-channel panels or all 4-channel panels. You may not use both to control a single DM. For example, to control six channels, you must use either three 2-channel panels or two 4-channel panels; you cannot use one of each.

Cabling for six 2-channel panels

Panel 1 Channels A & B

DIO24 End DB-37 Female Plug		Wire Color	GPI Panel End DB-15 Female Plug	
A0	37	Pink	2	D0
A1	36	Brown	7	D1
A2	35	Purple	10	D2
A3	34	Yellow	14	D3
G	19	Black	4	G

Panel 2 Channels C & D

DIO24 End DB-37 Female Plug		Wire Color	GPI Panel End DB-15 Female Plug	
A4	33	Red	2	D0
A5	32	White	7	D1
A6	31	Blue	10	D2
A7	30	Orange	14	D3
G	17	Green	4	G

Panel 3 Channels E & F

DIO24 End DB-37 Female Plug		Wire Color	GPI Panel End DB-15 Female Plug	
B0	10		2	D0
B1	9		7	D1
B2	8		10	D2
B3	7		14	D3
G	15		4	G

Panel 4 Channels G & H

DIO24 End DB-37 Female Plug		Wire Color	GPI Panel End DB-15 Female Plug	
B4	6		2	D0
B5	5		7	D1
B6	4		10	D2
B7	3		14	D3
G	13		4	G

Panel 5 Channels I & J

DIO24 End DB-37 Female Plug		Wire Color	GPI Panel End DB-15 Female Plug	
C0	29		2	D0
C1	28		7	D1
C2	27		10	D2
C3	26		14	D3
G	11		4	G

Panel 6 Channels K & L

DIO24 End DB-37 Female Plug		Wire Color	GPI Panel End DB-15 Female Plug	
C4	25		2	D0
C5	24		7	D1
C6	23		10	D2
C7	22		14	D3
G	21		4	G

GPIs Section for six 2-channel panels

```
Play1=  08:0F                   Play7=  8000:F000
Recue1= 04:0F                   Recue7= 4000:F000
Freeze1=02:0F                   Freeze7=2000:F000
Abort1= 01:0F                   Abort7= 1000:F000

Play2=  07:0F                   Play8=  7000:F000
Recue2= 0B:0F                   Recue8= B000:F000
Freeze2=0D:0F                   Freeze8=D000:F000
Abort2= 0E:0F                   Abort8= E000:F000

Play3=  80:F0                   Play9=  080000:0F0000
Recue3= 40:F0                   Recue9= 040000:0F0000
Freeze3=20:F0                   Freeze9=020000:0F0000
Abort3= 10:F0                   Abort9= 010000:0F0000

Play4=  70:F0                   Play10=  070000:0F0000
Recue4= B0:F0                   Recue10= 0B0000:0F0000
Freeze4=D0:F0                   Freeze10=0D0000:0F0000
Abort4= E0:F0                   Abort10= 0E0000:0F0000

Play5=  0800:0F00               Play11=  800000:F00000
Recue5= 0400:0F00               Recue11= 400000:F00000
Freeze5=0200:0F00               Freeze11=200000:F00000
Abort5= 0100:0F00               Abort11= 100000:F00000

Play6=  0700:0F00               Play12=  700000:F00000
Recue6= 0B00:0F00               Recue12= B00000:F00000
Freeze6=0D00:0F00               Freeze12=D00000:F00000
Abort6= 0E00:0F00               Abort12= E00000:F00000
```

Cabling for three 4-channel panels

Panel 1 Channels A, B, C, D

DIO24 End DB-37 Female Plug		Wire Color	GPI Panel End DB-15 Female Plug	
A0	37		2	D0
A1	36		7	D1
A2	35		10	D2
A3	34		14	D3
A4	33		15	D4
G	19		4	G

Panel 2 Channels E, F, G, H

DIO24 End DB-37 Female Plug		Wire Color	GPI Panel End DB-15 Female Plug	
B0	10		2	D0
B1	9		7	D1
B2	8		10	D2
B3	7		14	D3
B4	6		15	D4
G	17		4	G

Panel 3 Channels I, J, K, L

DIO24 End DB-37 Female Plug		Wire Color	GPI Panel End DB-15 Female Plug	
C0	29		2	D0
C1	28		7	D1
C2	27		10	D2
C3	26		14	D3
C4	25		15	D4
G	15		4	G

GPIs Section for three 4-channel panels

```
Play1=  18:1F                   Play7=  0800:1F00
Recue1= 14:1F                   Recue7= 0400:1F00
Freeze1=12:1F                   Freeze7=0200:1F00
Abort1= 11:1F                   Abort7= 0100:1F00

Play2=  17:1F                   Play8=  0700:1F00
Recue2= 1B:1F                   Recue8= 0B00:1F00
Freeze2=1D:1F                   Freeze8=0D00:1F00
Abort2= 1E:1F                   Abort8= 0E00:1F00

Play3=  08:1F                   Play9=  180000:1F0000
Recue3= 04:1F                   Recue9= 140000:1F0000
Freeze3=02:1F                   Freeze9=120000:1F0000
Abort3= 01:1F                   Abort9= 150000:1F0000

Play4=  07:1F                   Play10=  170000:1F0000
Recue4= 0B:1F                   Recue10= 1B0000:1F0000
Freeze4=0D:1F                   Freeze10=1D0000:1F0000
Abort4= 0E:1F                   Abort10= 1E0000:1F0000

Play5=  1800:1F00               Play11=  080000:1F0000
Recue5= 1400:1F00               Recue11= 040000:1F0000
Freeze5=1200:1F00               Freeze11=020000:1F0000
Abort5= 1500:1F00               Abort11= 010000:1F0000

Play6=  1700:1F00               Play12=  070000:1F0000
Recue6= 1B00:1F00               Recue12= 0B0000:1F0000
Freeze6=1D00:1F00               Freeze12=0D0000:1F0000
Abort6= 1E00:1F00               Abort12= 0E0000:1F0000
```

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Avid
6400 Enterprise Lane
Madison, Wisconsin 53719 USA
Tel: +1-608-274-8686 Fax: +1-608-273-5876

Avid
Intec 1
Wade Road
Basingstoke Hants RG24 8NE UK
Tel: +44 1256 814300 Fax: +44 1256 814700

Avid
Unit 6
2 Eden Park Drive
North Ryde NSW 2113 AUSTRALIA
Tel: +61 2 8877 6880 Fax: +61 2 8877 6881

Avid
Tegel Forum
Breitenbachstraße 10
Berlin 13509 GERMANY
Tel: +49 30 5900993 0 Fax: +49 30 5900993 24

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