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DN-700R

Serial Command Protocol Guide

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Introduction

Thank you for purchasing the DN-700R. At Denon Professional, performance and reliability mean as much to us as they do to you. That's why we design our equipment with only one thing in mind—to make your performance the best it can be.

Support

For the latest information about this product (documentation, technical specifications, system requirements, compatibility information, etc.) and product registration, visit **denonpro.com**.

For additional product support, visit **denonpro.com/support**.

General Overview

With serial remote control, a "host" machine (such as a PC running proper software) can be used to operate your DN-700R. Throughout this document, the equipment used to control DN-700R will be called the **Host**.

To learn more about the different types of serial communication and the code structure it requires, see the *Communication Protocol* section that starts on the next page. To view the complete list of serial command codes, see the *Control Command Codes*, *Status Request Command Codes/Status Information Codes*, and *Automatic Status Information Codes* sections later in this manual.

Connecting the Host to DN-700R

For serial remote control, you must first connect the host to your DN-700R by taking one of the following three steps:
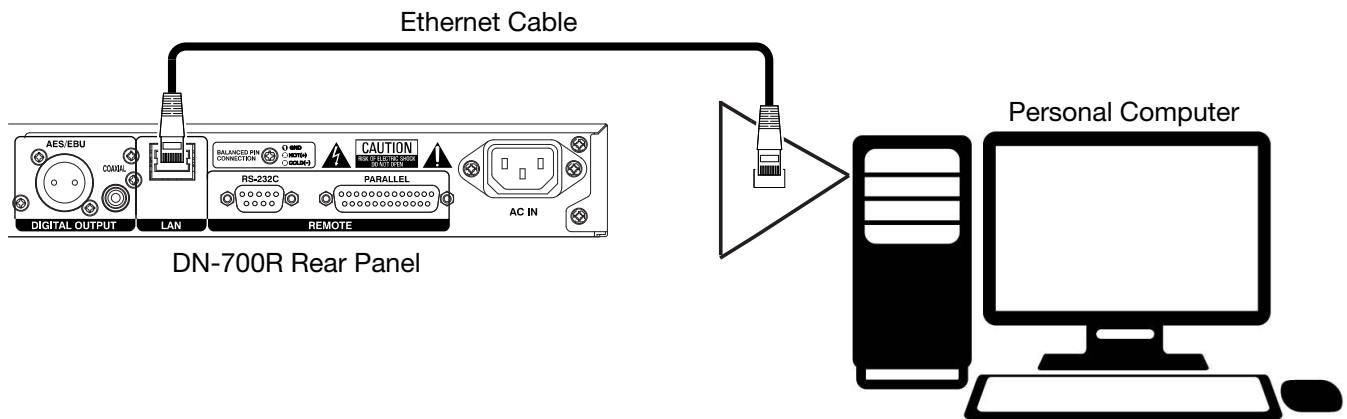
Example 1

Use an RS-232C straight cable (9-Pin D-Sub Male) to connect the RS-232C input on the rear panel of your DN-700R to the corresponding output on the host.


RS-232C Straight Cable

Personal Computer
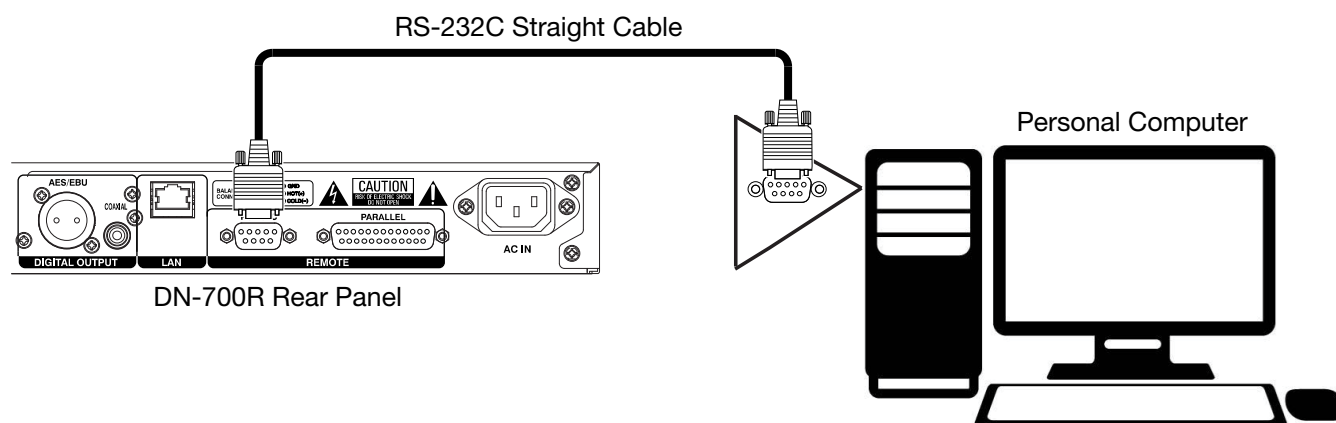
DN-700R Rear Panel

Example 2

Use an ethernet cable to connect the LAN port on the rear panel of your DN-700R to the corresponding port on the host.

Ethernet Cable

Personal Computer

DN-700R Rear Panel

Example 3

Use an ethernet cable to connect the LAN port on the rear panel of your DN-700R to a router that the host is also connected to.

Router

Ethernet Cable   Ethernet Cable

Personal Computer

DN-700R Rear Panel
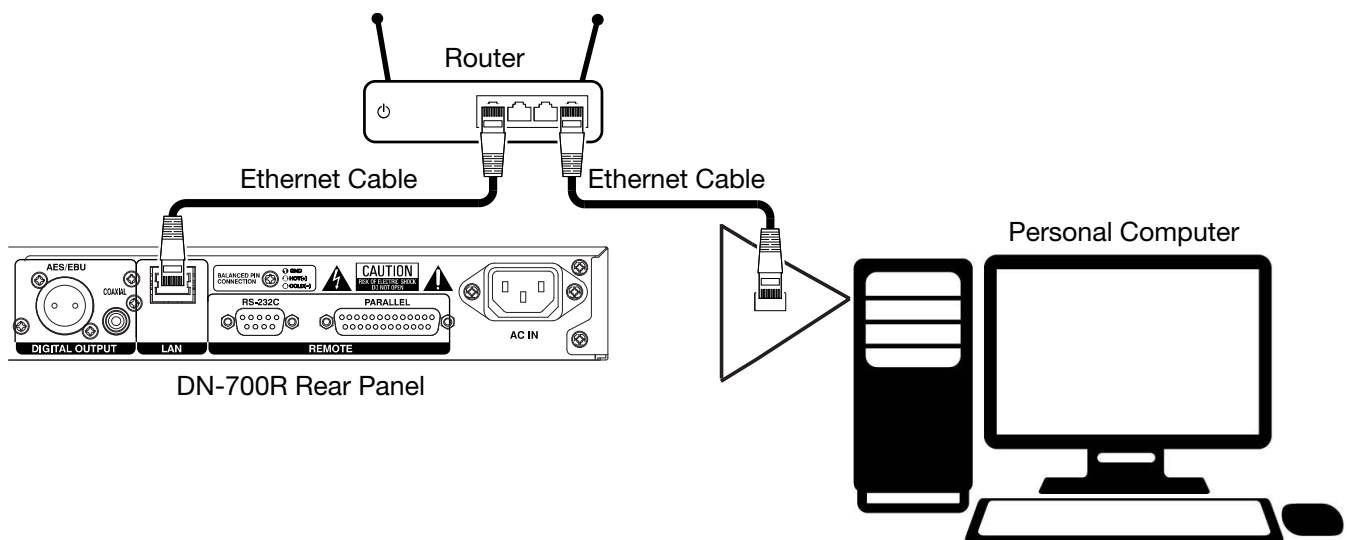
Note: Only one network user can be connected to DN-700R at a time. This means that two different computers cannot be used for serial communication with DN-700R at the same time, and you cannot use the LAN port for serial communication while DN-700R is already being controlled by the web browser remote.

After setting up for serial communication via an ethernet connection, entering the preset Admin password will be required if the **IP Control Auth** setting is set to **On** in your DN-700R's system settings. To enter the password, you will need to send the "Admin Password" status request command (included on page 24 in the ***Status Request Command Codes/Status Information Codes*** table). This code is **@0?LIxxxx\r**, where *xxxx* stands for the password.

If the correct password is entered in the "Admin Password" status request command, DN-700R will answer the host with the login successful code: **@0LIOK\r**. If the incorrect password is entered in the "Admin Password" status request command, DN-700R will answer the host with the login failed code: **@0LING\r**. After you receive the login failed code, you can try again to enter the password.

Communication Protocol

Types of Serial Communication

Three types of serial communication can be transmitted between the host and DN-700R:

1. Control commands sent to DN-700R from the host

You can use control commands to make DN-700R perform a desired function (such as initiating a recording or playing a track).

When DN-700R successfully receives a control command from the host, DN-700R sends an ACK signal to the host and then executes the command.

DN-700R	Host

Control Command
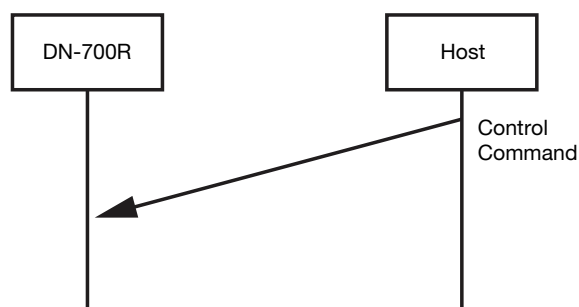
2. Status request commands sent to DN-700R from the host

You can use a status request command to determine the current state of one of DN-700R's components (such as the amount of free space left on the media source or the currently selected recording input).

When DN-700R successfully receives a status request command from the host, DN-700R answers the host with an ACK signal followed by the requested status information.

DN-700R	Host

Status Request Command

Status Information
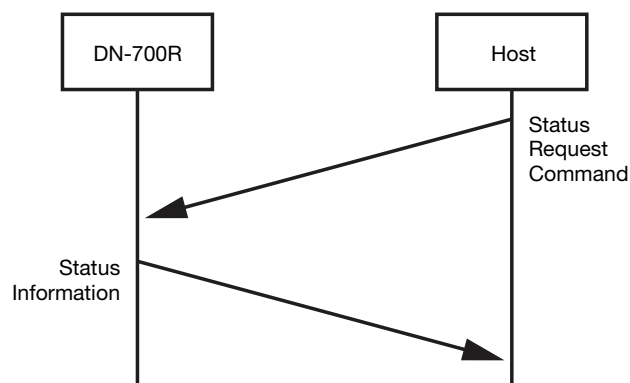
3. Status information automatically sent to the host when a change is made from DN-700R

When certain changes to DN-700R are made from the device itself, DN-700R automatically sends status information to the host. When the host receives automatic status information successfully, it sends an ACK signal to DN-700R.

DN-700R	Host

Status Information
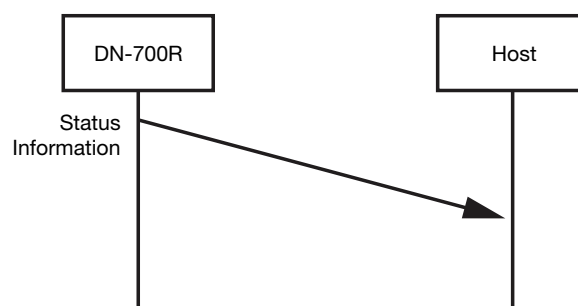
Structure of the Codes

Serial communication between the host and DN-700R uses ASCII Code from 0x20 to 0x7F.

All control command codes, status request command codes, and status information codes require three components that form a "packet." In order, the components are the **start character** + **ID**, the **command**, and the **end character** (0x0D):

1. Start Character + ID: **@** (0x40) + **0** (0x30)

2. Command: some letters and/or numbers that stand for a controllable feature of DN-700R

3. End Character: **\r** (0x0D)

The required start character/ID and end character are the same in all codes, whereas the command portion varies with each code.

For example, the full control command code that the host can use to power on DN-700R is **@023PW\r**:

Command

Start Character + ID → | @0 | 23PW | \r | ← End Character

Rules on Transmitting Command Codes

- When DN-700R receives a control command or status request command from the host, DN-700R should respond within 300 ms.
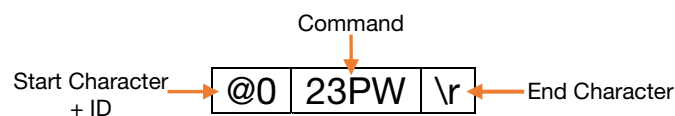
- When DN-700R successfully executes a command that it receives from the host, DN-700R sends an ACK signal (0x06) to the host (as well as the status information code in the case of a status request command).

- If DN-700R receives an unknown command from the host or if a received command fails for some other reason, DN-700R will send a NACK signal (0x15) to the host.

- When sending consecutive commands from the host, do not send the second command until DN-700R has answered the first with the ACK (0x06) or NACK (0x15) signal. If the second command is sent before the ACK (0x06) or NACK (0x15) signal is received, DN-700R will send the "Busy" status information code (**@0BDERBUSY**) to the host.

- If DN-700R does not receive a command that the host sent within 300 ms, the host will automatically send the same command up to two additional times. If DN-700R still does not receive the command after the second automatic attempt, the process will timeout, and the host will send the end character to DN-700R.

- Do not send a second status request command from the host until DN-700R has responded to the first.

- When sending a command to DN-700R from the host, make sure that no longer than 5 ms passes between entering each character in the command code.

- All characters used in codes transmitted between the host and DN-700R must fall within the bounds of the acceptable character table in the *Appendix*.

- Wait at least one second after sending the Power On command before sending the next command.

- When status information is automatically sent to the host after a change to DN-700R is made from the device itself, the host will send an ACK (0x06) signal to DN-700R. If DN-700R does not receive the ACK signal within 300 ms, it will automatically send the status information to the host again. If DN-700R then fails to receive the ACK (0x06) signal again, the process will timeout.

Control Command Codes

Use the codes below to control your DN-700R.

In cases where the control command code includes a variable, the variable is indicated in *italicized font* and the potential values are indicated in **bold font**.

CATEGORY	CONTENTS	CODE	DESCRIPTION
Control Commands **(Host → DN-700R)**			
Power/Media	Power On	@023PW\r	Powers on DN-700R
	Power Standby	@02312\r	Puts DN-700R in standby
	Set Power On Mode	@0PO*XX*\r	Changes the default mode that DN-700R will enter when it is powered on, where *XX* (the mode) = **RM** (resume playback of the last played track), **PF** (play the first track in the last used folder), **ST** (stop playback), or **RE** (begin recording to the last selected media source)
	Select Media Source	@0MM*XX*\r	Selects the media source, where *XX* (the media source) = **S1** (SD Card 1), **S2** (SD Card 2), **US** (USB drive), or **NE** (Network)
Recording	Select Recording Input	@0IN*XX*\r	Selects the input to be used as the recording audio source, where *XX* (the input) = **UB** (the RCA input), **BA** (the analog XLR input), **DI** (the coaxial input), or **DB** (the AES/EBU input)
	Set Recording Channels	@0CH*XX*\r	Sets whether recorded files will be set to stereo or mono, where *XX* (the setting) = **ST** (stereo), **ML** (left channel mono), or **MX** (mixed left and right channel mono at –3 dB)
	Initiate Recording	@02355\r	If One Touch Recording is set to off, the first entry of this command puts DN-700R in recording mode, and the second entry initiates recording If One Touch Recording is set to on, the first entry of this command initiates recording
	One Touch Rec On/Off	@0OR*NN*\r	Turns One Touch Recording on or off, where *NN* = **00** (on) or **01** (off)
	Pause Recording	@023Rp\r	Pauses an in-progress recording
	Split Recording	@023MT\r	Splits an in-progress recording into two separate files at the point the command is executed
	Rec Monitor On/Off	@023RM*NN*\r	Turns the recording monitor feature on or off, where *NN* = **00** (on) or **01** (off)
	Set Input Volume Type	@0VI*XX*\r	Determines whether the recording input volume can be adjusted or whether it is fixed at 0 dB, where *XX* = **VA** (can be adjusted) or **FX** (fixed at 0 dB)
	Both Channel Volume Up/Down	@023V*X*\r	Turns the volume of the recording up or down 1.0 dB for both the left and right channels, where *X* (the direction) = **+** (up) or **-** (down)

Control Commands (Host → DN-700R)			
CATEGORY	**CONTENTS**	**CODE**	**DESCRIPTION**
Recording	Left Channel Volume Up/Down	@023L*X*\r	Adjusts the volume of the left recording channel up or down 1.0 dB, where *X* (the direction) = **+** (up) or **-** (down)
	Right Channel Volume Up/Down	@023R*X*\r	Adjusts the volume of the right recording channel up or down 1.0 dB, where *X* (the direction) = **+** (up) or **-** (down)
	Adjust L/R balance	@023B*X*\r	Adjusts the balance of the left and right recording channels, where *X* = **L** (increase the volume of the left channel by 1.0 dB and decrease the volume of the right channel by 1.0 dB) or **R** (increase the volume of the right channel by 1.0 dB and decrease the volume of the left channel by 1.0 dB)
	Adjust Pre-Record Time	@0PR*N*S\r	Sets the amount of time it will take DN-700R to begin recording after the record command is executed, where *N* (the amount of time in seconds) = **1–5**; if no variable is entered in the command, the pre-record time feature will be disactivated
	Set Format to PCM	@0AFPM*NN*\r	Sets the file format for recordings to PCM and sets the file bit length, where *NN* stands for the bit length
	Set Format to MP3	@0AFM3*NNN*\r	Sets the file format for recordings to MP3 and sets the file bit rate, where *NNN* (the bit rate in Kbps) = **064**, **128**, **192**, **256**, or **320**
	Select Current Folder	@0RfCU\r	Sets the currently selected folder as the destination for saving new recorded files
	Select Specific Folder	@0RfFX*xxxx*\r	Sets a specified folder as the destination for saving new recorded files, where *xxxx* stands for the folder name (absolute path not required)
Advanced Recording Options	Dual Record On/Off	@0dR*XX*\r	Activates/deactivates dual recording and selects the backup media, where *XX* = **OF** (turns dual recording off), **S1** (turns dual recording on and selects SD Card 1 as the backup media), **S2** (turns dual recording on and selects SD Card 2 as the backup media), or **US** (turns dual recording on and selects USB as the backup media)
	Relay Record On/Off	@0rR*XX*\r	Activates/deactivates relay recording and selects the secondary media, where *XX* = **OF** (turns relay recording off), **S1** (turns relay recording on and selects SD1 as the secondary media), **S2** (turns relay recording on and selects SD Card 2 as the secondary media) or **US** (turns relay recording on and selects USB as the secondary media)

Control Commands (Host → DN-700R)			
CATEGORY	**CONTENTS**	**CODE**	**DESCRIPTION**
Advanced Recording Options	Turn Auto Track On/Off	@0AT*hhmm*\r	Sets DN-700R to automatically split an in-progress recording into a new file as soon as a specified interval of time has elapsed, where *hhmm* (the interval of time in hours and minutes) = **0001**, **0005**, **0010**, **0015**, **0030**, **0100**, **0200**, **0600**, **0800**, **1200**, **2400**; enter **0000** for the variable to deactivate the auto track function
	Add Mark	@023121\r	Adds a mark to the track at the current recording position
	Turn Silent Skip On/Off	@0SS*NN*\r	Determines whether DN-700R will automatically pause recording if the audio input reaches below the specified volume threshold and then automatically resume recording if the audio input reaches above the threshold, where *NN* = **00** (turn on silent skip) or **01** (turn off silent skip)
	Turn Automark On/Off	@0AM*NN*\r	Determines whether DN-700R will automatically add a mark to tracks once they reach below the specified volume threshold, where *NN* = **00** (turn automark on) or **01** (turn automark off)
	Set Silent Level	@0SL*NN*\r	Sets the threshold for how quiet the audio input must be in order for a recording to automatically pause when Silent Skip is activated or for a mark to be automatically added when Automark is activated, where *NN* (the threshold in –dB) = **20**, **38**, **54**, or **60**
	Set Silent Time	@0SC*NN*\r	Sets how long the audio input must be below the specified volume threshold in order for recording to be automatically paused when Silent Skip is activated or for a mark to be automatically added when Automark is activated, where *NN* (the length of time in seconds) = **01–05**
	Set Sample Rate	@0FS*XX*\r	Sets the sample rate for recorded files, where *XX* (the sample rate in kHz) = **44**, **48**, **96** or **EX** (for the AES/EBU input)
	Set File Name Format	@0Ff*XXX*\r	Determines the file name format for recorded files, where *XXX* (the format) = **MDU**, **MUD**, **DMU**, **DUM**, **UMD**, or **UDM** Note: In the six potential values, "M" stands for machine name, "D" stands for recording start time, and "U" stands for user area
	Edit Machine Name	@0MN*xxxx*\r	Changes the machine name, where *xxxx* stands for the new machine name See ***Appendix > Acceptable Characters for Serial Communication*** for details on which characters can be used in the machine's new name

Control Commands (Host → DN-700R)			
CATEGORY	**CONTENTS**	**CODE**	**DESCRIPTION**
Advanced Recording Options	Rename User Area	@0U*axxxx*\r	Edits the user area character string to be automatically included in recorded file names, where *xxxx* stands for a user area name of up to 32 characters See ***Appendix > Acceptable Characters for Serial Communication*** for details on which characters can be used in the user area's new name
	Add/Remove User Area in Recorded File Name Format	@0US*NN*\r	Sets recorded file names to automatically include or not include the user area name, where *NN* (the setting) = **00** (include) or **01** (don't include)
	Set Timer (by day of the week)	@0ShDW*XXxxx xxxxHHMMhhm mUUUUU*\r	Sets DN-700R to automatically start recording at a specific day and time: • *XX* (the record timer setting number) = **01–30** • *xxxxxxx* (the day or days of the week) = **SMTWTFS** and/or **_**; see note below for details • *HHMM* (the start time in hours and minutes) = **0000–2359** • *hhmm* (the duration of the recording in hours and minutes) = **0000–2359** • *UUUUU* stands for a user area name of up to 32 characters Note: For the *xxxxxxx* variable, an entry must be made for all seven days of the week; if you would like to skip a day of the week, enter **_** instead of the first letter of the day name; for example, to set the recording only on Monday, Wednesday and Friday, enter **_M_W_F_** for *xxxxxxx* Note: If you want to set the recording to start every hour, enter ****** for the *HH* variable
	Set Timer (by specific date and time)	@0ShDT*XXYYM MDDHHMMhh mmUUUUU*\r	Sets DN-700R to automatically start recording at a specific date and time: • *XX* (the record timer setting number) = **01–30** • *YYMMDD* (the year, month, and date to start recording) = **130101–351231** • *HHMM* (the start time in hours and minutes) = **0000–2359** • *hhmm* (the duration of the recording in hours and minutes) = **0000–2359** • *UUUUU* stands for a user area name of up to 32 characters Note: To set the recording to occur annually, enter ****** for the *YY* variable; to set the recording to occur monthly, enter ****** for the *MM* variable
	Timer Off	@023TO\r	Turns the record timer(s) off
	Delete Timer Setting	@0ShDL*NN*\r	Deletes the timer assigned to the timer setting number, where *NN* (the timer setting number) = **01–30**

Control Commands (Host → DN-700R)			
CATEGORY	**CONTENTS**	**CODE**	**DESCRIPTION**
Advanced Recording Options	Delete All Timer Settings	@0ShAD\r	Delete all 30 record timer settings on DN-700R
	Set Archive Mode	@0AR*XX*\r	Sets whether/how DN-700R will archive recorded files, where *XX* (the setting) = **AT** (recorded files will be automatically archived as soon as they are finished recording), **SC** (recorded files will be archived according to a set schedule), or **01** (DN-700R will not archive any recorded files)
	Set Archive Timer (by day of the week)	@0asDW*xxxxxx xhhmm*\r	Sets DN-700R to automatically archive previously recorded files at a recurring day and time: • *xxxxxx* (the day or days of the week that the archiving will take place) = **SMTWTFS** and/or **_**; see note below for details • *HHMM* (the time that the archiving will take place in hours and minutes) = **0000–2359** Note: For the *xxxxxx* variable, an entry must be made for all seven days of the week; if you would like to skip a day of the week, enter _ instead of the first letter of the day name; for example, to set the recording only on Monday, Wednesday and Friday, enter **_M_W_F_** for the *xxxxxx* variable Note: If you want to set the recording to start every hour, enter ****** for the *hh* variable
	Set Archive Timer (by specific date and time)	@0asDT*YYMM DDhhmm*\r	Sets DN-700R to automatically archive previously recorded files at a specific date and time, where *YYMMDD* (the year, month, and date to archive the files) = **130101–351231** and *hhmm* (the time to archive the files in hours and minutes) = **0000–2359** Note: If you want the archiving to recur annually, enter ****** for the *YY* variable; if you want the archiving to recur monthly, enter ****** for the *MM* variable
	Turn Clear After Arc. On/Off	@0CA*NN*\r	Sets whether DN-700R automatically deletes recorded files after they are archived, where *NN* (the setting) = **00** (automatically delete after archiving) or **01** (don't automatically delete after archiving)
	Turn Auto Deletion On/Off	@0AD*HH*\r	Sets DN-700R to automatically delete archived files when the available memory on the current media source becomes limited to a specified amount of record time, where *HH* (the record time in hours) = **01**, **03**, **06**, **12**, or **24**; enter **OF** for *HH* to deactivate the auto delete feature
	Reset Archive Settings	@0DEAC\r	Resets DN-700R's archive settings to their default values

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Control Commands (Host → DN-700R)			
CATEGORY	**CONTENTS**	**CODE**	**DESCRIPTION**
Advanced Recording Options	Lower/Raise Input Level	@0ltXYNN\r	Adjusts the analog input volume level for either the left or right channel, where X = **L** (for the left channel) or **R** (for the right channel) and YNN (the volume adjustment in multiples of 0.1 dB) = **-20 – +20** For example, to increase the volume of the left channel by 1.5 dB, enter this code: @0ltL+15
	Set Recording Input Routing (Signal Pass Thru)	@0SpNN\r	Sets the recording input signal to be routed through the audio outputs, where NN (the setting) = **00** (route the recording input signal through the audio outputs) or **01** (don't route the recording input signal through the audio outputs)
	Change Rec Level Type	@0RlXX\r	Changes the function of the record level knob on the front panel, where XX (the function) = **MA** (the record level knob will primarily adjust the volume level of the left and right channels; while shift is engaged, the record level knob will adjust the balance of the left and right channels) or **LR** (the record level knob will primarily adjust the volume level of the left channel; while shift is engaged, the record level knob will adjust the volume level of the right channel)
	Change Auto Level Control (ALC) Type	@0RLXX\r	Determines the function of the Auto Level Control (ALC) feature, where XX = **MA** (turns off ALC), **SE** (separate: ALC is applied to the left and right recording channels individually), or **MI** (mixed: ALC is applied equally to the left and right recording channels)
	Set XLR Voltage Level	@0LMXNN\r	Sets the XLR input channel to line or mic level, where X = **L** (for the left channel) or **R** (for the right channel) and NN (the voltage level) = **LN** (line) or **MC** (mic)
	Set XLR Mic Input Sensitivity	@0MsXNN\r	Adjust the mic input sensitivity for the XLR input, where X = **L** (for the left channel) or **R** (for the right channel) and NN (the mic input sensitivity level in –dBu) = **16–60**
	Turn Phantom Power On/Off	@0PhXYY\r	Turns phantom power on or off for the XLR input, where X = **L** (for the left channel) or **R** (for the right channel) and YY = **00** (phantom power on) or **01** (phantom power off) <u>Note</u>: When the XLR input is set to line level, phantom power will be turned off automatically
Track Playback	Play	@02353\r	Plays the current track
	Pause	@02348\r	Pauses the current track
	Stop	@02354\r	Stops the current tracklist
	Hot Start Play	@0HPnn\r	Plays the track assigned the entered hot start number, where nn (the hot start number) = **01–20**

Control Commands (Host → DN-700R)			
CATEGORY	**CONTENTS**	**CODE**	**DESCRIPTION**
Track Playback	Set Playback Range	@0Pr*XX*\r	Selects the tracks to be included in the current tracklist, where *XX* (the setting) = **AL** (all tracks in all folders on the current media source) or **FD** (only the tracks in the currently selected folder on the current media source)
	Set Playback Mode	@0PM*XX*\r	Sets how DN-700R will cycle through the current tracklist, where *XX* (the setting) = **SP** (play one track in the current tracklist and then stop playback) or **CN** (continuously play through the tracks in the current tracklist)
	Turn Repeat On/Off	@0RE*NN*\r	Activates or deactivates the repeat feature, where *NN* = **00** (turn repeat on) or **01** (turn repeat off)
	Turn Random On/Off	@0RN*nn*\r	Activates or deactivates random playback for the current tracklist, where *nn* = **00** (turn random on) or **01** (turn random off)
	Turn Program List On/Off	@0PG*NN*\r	Activates playback of the pre-programmed tracklist, where *NN* = **00** (turn program list on) or **01** (turn program list off)
	Set Finish Mode	@0FM*XX*\r	Sets the playback status when the stop command is executed, where *XX* (the setting) = **ST** (stop: the current tracklist will stop), **NT** (next track: the next track in the tracklist will be cued), **RC** (recue: DN-700R will skip to the point at which playback was previously started)
Advanced Playback Options	Set Fade In Time	@0FI*nn*\r	Determines how long a track will fade in when playback is initiated, where *nn* (the length of the fade) = **00** (off/no fade in), **05** (500 milliseconds), **10** (1 second), or **30** (3 seconds)
	Set Fade Out Time	@0FO*nn*\r	Determines how long a track will fade out before playback ends, where *nn* (the length of the fade) = **00** (off/no fade out), **05** (500 milliseconds), **10** (1 second), or **30** (3 seconds)
	Set Playback Delay	@0sD*nnn*\r	Determines how long of a delay there will be after track playback is initiated, where *nnn* (the length of the delay) = **000** (off/no delay), **010** (100 milliseconds), **020** (200 milliseconds), or **030** (300 milliseconds)
	Set EOM Time	@0ED*nn*\r	Sets how long before the end of a track it will take before the "End of Message" icon displays, where *nn* (the length of time in seconds) = **00**, **05**, **10**, **15**, **20**, **30**, **60**, or **OF** (turns the EOM feature off)
	Autocue On/Off	@0AC*NN*\r	Sets the DN-700R to skip audio in the beginning of tracks that is below a specific volume threshold, where *NN* (the volume threshold in −dB) = **36**, **42**, or **48**; if **00** is entered, the autocue function will be deactivated

Control Commands (Host → DN-700R)			
CATEGORY	**CONTENTS**	**CODE**	**DESCRIPTION**
Advanced Playback Options	Set Timer (by day of the week)	@0TPDW*XXxxx xxxxhhmmFFFFF*\r	Sets DN-700R to automatically start playing a track at a specific day and time: • *XX* (the playback timer setting number) = **01–30** • *xxxxxxx* (the day or days of the week) = **SMTWTFS** and/or _; see note below for more details • *hhmm* (the start time in hours and minutes) = **0000–2359** • *FFFFF* stands for the name of the track file (absolute path required) <u>Note</u>: For the *xxxxxxx* variable, an entry must be made for all seven days of the week; if you would like to skip a day of the week, enter _ instead of the first letter of the day name; for example, to set track playback only on Monday, Wednesday and Friday, enter **_M_W_F_** for *xxxxxxx* <u>Note</u>: If you want to set track playback to start every hour, enter ****** for the *HH* variable See *Appendix > Entering the Absolute Path for Folder and File Names* for details on the requirements for entering absolute paths
	Set Timer (by date and time)	@0TPDT*XXYYM MDDhhmmFFFFF*\r	Sets DN-700R to automatically start playing a track at a specific date and time: • *XX* (the playback timer setting number) = **01–30** • *YYMMDD* (the year, month, and date to start playback) = **130101–351231** • *hhmm* (the start time in hours and minutes) = **0000–2359** • *FFFFF* stands for the name of the track file (absolute path required) <u>Note</u>: To set track playback to occur annually, enter ****** for the *YY* variable; to set track playback to occur monthly, enter ****** for the *MM* variable See *Appendix > Entering the Absolute Path for Folder and File Names* for details on the requirements for entering absolute paths
	Set Timer Priority	@0tp*NN*\r	Determines the conditions under which the playback timer will start playback, where *NN* = **00** (the scheduled playback will start as long as recording is not in progress) or **01** (the scheduled playback will only start if DN-700R is paused, stopped, or in standby)
	Delete Timer Setting	@0TPDL*NN*\r	Deletes the timer assigned to the timer setting number, where *NN* (the playback timer setting number) = **01–30**
	Delete All Timer Settings	@0TPAD\r	Deletes all 30 playback timer settings on DN-700R
Track Selection	Restart/Previous Track	@02333\r	Restarts the current track or skips to the previous track in the tracklist

Control Commands (Host → DN-700R)			
CATEGORY	**CONTENTS**	**CODE**	**DESCRIPTION**
Track Selection	Next Track	@02332\r	Skips to the next track in the tracklist
	Hot Start Cue Up	@0HC*nn*\r	Cues up the track assigned the entered hot start number, where *nn* (the hot start number) = **01–20**
	Select Track Number (3 digit)	@0TR*nnn*\r	Selects the track corresponding to the entered file number, where *nnn* (the track file number) = **001–999**
	Select Track Number (4 digit)	@0Tr*nnnn*\r	Selects the track corresponding to the entered file number, where *nnnn* (the track file number) = **0001–2000**
	Select Folder Number	@0Sf*nnnn*\r	Selects the folder corresponding to the entered number, where *nnnn* (the folder number) = **0001–2000**
	Set File Order	@0FR*XX*\r	Sets whether files in media source folders are ordered alphabetically or by date, where *XX* (the setting) = **AL** (alphabetically) or **DA** (date)
	Load Program List	@0Pl*XXXX*\r	Loads the program list, where *XXXX* stands for the program list's file name (absolute path required) See ***Appendix > Entering the Absolute Path for Folder and File Names*** for details on the requirements for entering absolute paths
	Add to Program List	@0Pi*nnNNNN*\r	Adds the track to the currently loaded program list, where *nn* (the desired position in the program list) = **01–99**, and *NNNN* (the track file number) = **0001–2000**
	Take Off Program List	@0Pm*nn*\r	Removes a track from its position in the currently loaded program list, where *nn* (the position in the program list) = **01–99**
	Save Program List	@0Ps*XXXX*\r	Save the currently loaded program list as a new file, where *XXXX* stands for a file name of up to 252 characters (absolute path required) See ***Appendix > Acceptable Characters for Serial Communication*** for details on which characters can be used in the name of the program list file See ***Appendix > Entering the Absolute Path for Folder and File Names*** for details on the requirements for entering absolute paths
Track Searching	Rewind (cyclic)	@02350\r	Rewinds the current track; each entry of the command cycles through the rewind speeds (2x, 10x, 50x, 100x, and 200x)
	Rewind (specific)	@02350*n*\r	Rewinds the current track at a specific speed, where *n* (the speed) = **1** (for 2x), **2** (for 10x), **3** (for 50x), **4** (for 100x), or **5** (for 200x)
	Skip Back	@023SB\r	Rewinds the current track by a set number of seconds

Control Commands (Host → DN-700R)			
CATEGORY	**CONTENTS**	**CODE**	**DESCRIPTION**
Track Searching	Set Skip Back Time	@0SB*NNN*\r	Sets the number of seconds that a track will rewind when Skip Back is executed, where *NNN* (the number of seconds in multiples of 0.1) = **005–600** (0.5 second – 60 seconds)
	Fast Forward (cyclic)	@02352\r	Fast forwards the current track; each entry of the command cycles through the fast forward speeds (2x, 10x, 50x, 100x, and 200x)
	Fast Forward (specific)	@02352*n*\r	Fast forwards the current track at a specific speed, where *n* (the speed) = **1** (for 2x), **2** (for 10x), **3** (for 50x), **4** (for 100x) or **5** (for 200x)
	Set Search Audibility	@0sM*XX*\r	Determines whether audio will be heard while fast-forwarding or rewinding at the 2x speed, where *XX* = **NO** (audio will be heard) or **SL** (audio will not be heard)
	Activate Frame Mode	@0frON\r	Enters DN-700R in frame search mode; after entering frame search mode, the current track will be paused, and the track will be audible while skipping frame units
	Frame Forward	@0fr00\r	Skips forward one frame unit in the current track
	Frame Reverse	@0fr01\r	Skips back one frame unit in the current track
	Skip Back to Mark	@023M-\r	Skips back to the mark prior to the current track's playback position
	Skip Ahead to Mark	@023M+\r	Skips ahead to the mark after the current track's playback position
	Cue	@023CU\r	Skips to the track time position from which playback was last started and pauses the track
Hot Start Assignment	Load Hotlist	@0HL*XXXX*\r	Loads a hotlist file, where *XXXX* stands for the hotlist file name
	Assign Hot Start Number (with 3-digit track file number)	@0HS*nnNNN*\r	Assigns the track to the hot start number in the currently loaded hotlist, where *nn* (the hot start number) = **01–20** and *NNN* (the track file number) = **001–999** <u>Note</u>: Enter **000** for *NNN* to cancel the hot start number assignment
	Assign Hot Start Number (with 4-digit track file number)	@hs*nnNNNN*\r	Assigns the track to the hot start number in the currently loaded hotlist, where *nn* (the hot start number) = **01–20** and *NNNN* (the track file number) = **0001–2000** <u>Note</u>: Enter **0000** for *NNNN* to cancel the hot start number assignment
	Assign Hot Start Number (with file name)	@0Hs*nnXXXX*\r	Assigns the track to the hot start number in the currently loaded hotlist, where *nn* (the hot start number) = **01–20** and *XXXX* = the track file name (absolute path required) See ***Appendix > Entering the Absolute Path for Folder and File Names*** for details on the requirements for entering absolute paths

Control Commands (Host → DN-700R)			
CATEGORY	**CONTENTS**	**CODE**	**DESCRIPTION**
Hot Start Assignment	Save Hotlists	@0HSSR\r	Saves all DN-700R's hotlist files to the currently selected media source
Editing and Organizing Tracks/ Recordings	Divide	@023Dd\r	Splits into two files the current track or recording at the current playback/recording position
	Combine	@023CB*nnnn*\r	Combines the currently selected track with another track on the media source, where *nnnn* (the file number for the track to be combined with the current track) = **0001–2000**
	Delete Marks	@023Me\r	Delete all marks in the current track
	Pitch/Speed Editing On/Off	@02337*XX*\r	Enables or disables pitch/speed editing, where *XX* = **ON** (enable) or **OF** (disable)
	Lock/Unlock Master Key	@0KY*NN*\r	Determines whether using the pitch-control edits both the pitch and speed or whether the pitch is locked and only the speed can be edited, where *NN* = **00** (lock the pitch) or **01** (unlock the pitch)
	Pitch Up	@02338\r	Transposes the pitch/speed of the current track or recording by +0.1%
	Pitch Down	@02339\r	Transposes the pitch/speed of the current track or recording by –0.1%
	Adjust Pitch/Speed	@0PT*SSXXXX*\r	Enters a specific pitch/speed transposition for the current track/recording, where *SS* (the pitch-control on/off setting) = **ON** or **OF** and *XXXX* (the pitch/speed value as a percentage of the default pitch/speed between –16% and 16%) = **1160– 0160** Note: In the *XXXX* variable, a first digit of 0 makes the percentage positive, a first digit of 1 makes the percentage negative, and the last three digits are the pitch/speed value in multiples of 0.1% For example, to adjust the pitch/speed of the current track/recording by +14.5%, enter this code: @0PTON0145; to adjust the pitch/speed of the current track/recording by –8.0%, enter this code: @0PTON1080
	Undo	@023UD\r	Undoes the prior edit
	Create Folder	@0MF*xxxx*\r	Adds a new folder to the currently selected media source, where *xxxx* stands for the name of the new folder, with a maximum length requirement of 252 characters (absolute path not required) See *Appendix > Acceptable Characters for Serial Communication* for details on which characters can be used in the name of the new folder
	Delete Folder	@0DR*xxxx*\r	Deletes a folder from the currently selected media source, where *xxxx* stands for the name of the folder to be deleted (absolute path not required)

Control Commands (Host → DN-700R)			
CATEGORY	**CONTENTS**	**CODE**	**DESCRIPTION**
Editing and Organizing Tracks/ Recordings	Rename Folder	@0RF*xxx*:*XXX*\r	Renames a folder on the currently selected media source, where *xxx* stands for the current name of the folder (absolute path required) and *XXX* stands for the new folder name (absolute path not required) See *Appendix > Acceptable Characters for Serial Communication* for details on which characters can be used in the folder's new name See *Appendix > Entering the Absolute Path for Folder and File Names* for details on the requirements for entering absolute paths
	Move File (3 Digit)	@0Mv*nnnXXX*\r	Moves the file to the folder, where *nnn* (the file number) = **001–999** and *XXX* stands for the folder name (absolute path required) See *Appendix > Entering the Absolute Path for Folder and File Names* for details on the requirements for entering absolute paths
	Move File (4 Digit)	@0Mv*nnnnXXXX*\r	Moves the file to the folder, where *nnn* (the file number) = **0001–2000** and *XXXX* stands for the folder name (absolute path required) See *Appendix > Entering the Absolute Path for Folder and File Names* for details on the requirements for entering absolute paths
	Copy File (3 Digit)	@0CY*nnnXXX*\r	Copies the file to the folder, where *nnn* (the file number) = **001–999** and *XXX* stands for the folder name (absolute path required) See *Appendix > Entering the Absolute Path for Folder and File Names* for details on the requirements for entering absolute paths
	Copy File (4 Digit)	@0CY*nnnnXXXX*\r	Copies the file to the folder, where *nnnn* (the file number) = **0001–2000** and *XXXX* stands for the folder name (absolute path required) See *Appendix > Entering the Absolute Path for Folder and File Names* for details on the requirements for entering absolute paths
	Cancel Move/Copy	@0CNAL\r	Cancels the in-progress moving or copying of a file
	Delete File (3 digit)	@023Te*nnn*\r	Deletes the file, where *nnn* (the file number) = **001–999**
	Delete File (4 digit)	@023Te*nnnn*\r	Deletes the file, where *nnnn* (the file number) = **0001–2000**
	Rename File (3 digit)	@0RN*nnnXXX*\r	Renames the file, where *nnn* (the file number) = **001–999** and *XXX* stands for a file name no longer than 251 characters (absolute path not required) See *Appendix > Acceptable Characters for Serial Communication* for details on which characters can be used in the file's new name

Control Commands (Host → DN-700R)			
CATEGORY	**CONTENTS**	**CODE**	**DESCRIPTION**
Editing and Organizing Tracks/ Recordings	Rename File (4 digit)	@0RN*nnnnXXXX*\r	Renames the file, where *nnnn* (the file number) = **0001–2000** and *XXXX* stands for a file name no longer than 251 characters (absolute path not required) See ***Appendix > Acceptable Characters for Serial Communication*** for details on which characters can be used in the file's new name
Advanced Audio Settings	Lower/Raise Output Level	@0Ot*XYNN*\r	Adjusts the analog output volume level for either the left or right channel, where *X* = **L** (for the left channel) or **R** (for the right channel) and *YNN* (the volume adjustment in multiples of 0.1 dB) = **-20 – +20** For example, to increase the volume of the left channel by 1.5 dB, enter this code: @0ltL+15
	Set Audio Output Rate	@0dF*XX*\r	Sets the audio output sample rate, where *XX* = **AT** (automatic: sample rate will match that of the audio input source/file), **44** (sample rate will be set to 44.1 kHz), **48** (sample rate will be set to 48 kHz), **EX** (sample rate will be set using an external clock for the digital signal)
	Switch to Mono	@0MO*NN*\r	Sets the audio output to mono-summed or to match the input source, where *NN* = **00** (mono) or **01** (match the input source)
	Set Reference Level	@0Fr*NN*\r	Adjusts the reference level, where *NN* = **24** (+24 dBu for XLR / +10 dBv for RCA), **20** (+20 dBu for XLR / +6 dBv for RCA), or **18** (+18 dBu for XLR / +4 dBv for RCA)
Network Settings	Set Archive Server IP	@0Ai*xxxx*\r	Sets the IP address for network archiving, where *xxxx* stands for the IP address (omitting periods)
	Create FTP (Archive) Server User Name	@0Au*xxxx*\r	Creates a user name for the archive network, where *xxxx* stands for a user name of up to 255 characters See ***Appendix > Acceptable Characters for Serial Communication*** for details on which characters can be used in the user name
	Create FTP (Archive) Server Password	@0Ap*xxxx*\r	Creates a password for the archive network, where *xxxx* stands for a password of up to 12 characters See ***Appendix > Acceptable Characters for Serial Communication*** for details on which characters can be used in the password
	Set FTP (Archive) Server Folder	@0Ao*xxxx*\r	Sets the network folder to which archived files will be automatically saved, where *xxxx* stands for the folder name (absolute path required)
	Assign IP Address	@0Ip*xxxx*\r	Assigns a static IP address to DN-700R, where *xxxx* stands for the IP address (omitting periods); enter **AUTO00000000** for the *xxxx* variable to set DN-700R to be automatically assigned its IP address

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Control Commands (Host → DN-700R)			
CATEGORY	**CONTENTS**	**CODE**	**DESCRIPTION**
Network Settings	Set Subnet Mask	@0SM*xxxx*\r	If a static IP address is assigned to DN-700R, sets the subnet mask, where *xxxx* stands for the subnet mask number (omitting any periods) <u>Note</u>: DN-700R will automatically reboot after this command is executed
	Set Gateway IP	@0GW*xxxx*\r	If a static IP address is assigned to DN-700R, sets the Gateway IP address, where *xxxx* stands for the IP address (omitting periods) <u>Note</u>: DN-700R will automatically reboot after this command is executed
	Set DNS Server Address	@0DN*xxxx*\r	If a static IP address is assigned to DN-700R, sets the DNS server address, where *xxxx* stands for the address number (omitting periods) DN-700R will automatically reboot after this command is executed
	Set NTP Server Address	@0NP*xxxx*\r	Sets the NTP server address, where *xxxx* stands for the address number (omitting periods); to turn NTP off, enter **DISABLE00000** for the *xxxx* variable
	Enter NTP Cycle Time	@0NC*hhmm*\r	Enters the NTP cycle time, where *hhmm* (the cycle time in hours and minutes) = **0015–2400** <u>Note</u>: The cycle time can only be entered in fifteen minute increments
	Set Syslog Server Address	@0SI*xxxx*\r	Sets the syslog server address, where *xxxx* stands for the server address (omitting periods); to turn syslog off, enter **DISABLE00000** for the *xxxx* variable
	Set IP Control Port Number	@0Ip*NNNNN*\r	Sets the IP control port number, where *NNNNN* (the number) = **00000–65535** <u>Note</u>: DN-700R will automatically reboot after this command is executed
	Authentication On/Off	@0Ia*NN*\r	Sets whether password authentication is required for IP control, where *NN* (the setting) = **00** (required) or **01** (not required) <u>Note</u>: DN-700R will automatically reboot after this command is executed
	Create Operator Password	@0OP*xxxx*\r	Sets the operator password for the web remote control, where *xxxx* stands for a password of 6–12 characters See ***Appendix > Acceptable Characters for Serial Communication*** for details on which characters can be used in the password
	Create Observer Password	@0Op*xxxx*\r	Sets the observer password for the web remote control, where *xxxx* stands for a password of 6–12 characters See ***Appendix > Acceptable Characters for Serial Communication*** for details on which characters can be used in the password
	Logout of IP Control	@0LO\r	Logout of web remote control

Control Commands **(Host → DN-700R)**			
CATEGORY	**CONTENTS**	**CODE**	**DESCRIPTION**
Network Settings	Change Network Standby Setting	@0Ns*NN*\r	Sets whether DN-700R can be controlled from the network while it is in standby, where *NN* (the setting) = **00** (can be controlled) or **01** (can't be controlled)
Clock/Display Settings	Set Date and Time	@0Dt*YYMMDD hhmm*\r	Sets the date and time on DN-700R, where *YYMMDD* (the year, month, and day) = **130101– 351231** and *hhmm* (the time in hours:minutes) = **0000–2359**
	Set Time Zone	@0TZ*xHHMM*	Sets the time zone on DN-700R, where *x* (the offset direction) and *HHMM* (the offset amount in hours and minutes) = **-1200 – +1400**; **+0000** is GMT Note: the offset amount can only be adjusted in fifteen minute increments
	Observe/Don't Observe Daylight Savings	@0dS*NN*\r	Determines whether DN-700R will observe daylight savings in tracking the time, where *NN* = **00** (observe daylight savings) or **01** (don't observe daylight savings)
	Adjust Daylight Savings Time Offset	@0do*hhmm*\r	Adjust the daylight savings time offset, where *hhmm* (hours:minutes) = **0000–0600** Note: this setting can only be adjusted in fifteen minute increments
	Set Daylight Savings Start Date	@0ds*MMDDhh mm*\r	Sets the date and time when daylight savings will be applied, where *MMDD* (the month and day) = **0101–1231** and *hhmm* (the time in hours and minutes) = **0000–2359**
	Set Daylight Savings End Date	@0de*MMDDhh mm*\r	Sets the date and time when daylight savings will end, where *MMDD* (the month and day) = **0101–1231** and *hhmm* (the time in hours and minutes) = **0000–2359**
	Set Time Format	@0TD*XXX*\r	Determines how the time will be shown on DN-700R's display screen, where *XXX* (the time format) = **HMS** (shown in hours:minutes:seconds) or **MSF** (shown in minutes:seconds:frames)
	Set Time Notation	@0TF*NN*\r	Adjust the time notation setting for the display screen, where *NN* (the setting) = **12** (12-hour AM/PM clock) or **24** (24-hour clock)
	Set Date Format	@0DF*XX*\r	Determines how the date will be shown on the display screen, where *XX* (the date format) = **MD** (month/day/year), **DM** (day/month/year), or **YM** (year/month/day)
	Screen Saver On/Off	@0Ss*NN*\r	Activates or deactivates the screen saver that appears on the display screen after 30 minutes of inactivity, where *NN* = **00** (turn screen saver on) or **01** (turn screen saver off)
	Dimmer On/Off	@0DM*NN*\r	Activates or deactivates the dimmer for the Display screen and LED's, where *NN* = **00** (turn dimmer on) or **01** (turn dimmer off)

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Control Commands (Host → DN-700R)			
CATEGORY	**CONTENTS**	**CODE**	**DESCRIPTION**
Clock/Display Settings	Set Display Brightness	@0DD*NN*\r	Adjusts the brightness of the Display screen, where *NN* (the brightness setting) = **00** (100%), **01** (75%), **02** (50%), **03** (25%), or **04** (0%)
	Set LED Brightness	@0LD*NN*\r	Adjusts the brightness of the LEDs, where *NN* (the brightness setting) = **00** (100%), **01** (75%), **02** (50%), or **03** (25%)
	Set Contrast	@0BN*nn*\r	Adjusts the contrast of the display screen, where *nn* (the contrast setting) = **01–05**
	Set Display Language	@0LN*XX*\r	Changes the language for folder and file names shown on the display screen, where *XX* (the language) = **US** (English) or **JP** (Japanese) <u>Note</u>: Executing this command will cause DN-700R to reboot
	Set Hot Start Mode for the Parallel Input	@0PA*XX*\r	Sets whether a parallel remote in Hot Start Mode will play selected hot start tracks or only cue them, where *XX* (the setting) = **HT** (play selected hot start tracks) or **HC** (cue selected hot start tracks)
Other Settings	Set Fader Start Type for Parallel Input	@0FD*XX*\r	Determines the function of the fader start pin for the parallel remote (pin #9 in Normal Mode), where *XX* is one of the following: • **PL** (Play: plays the current track when the pin is closed) • **PU** (Play/Pause: plays the current track when the pin is closed; pauses the current track when the pin is opened) • **NE** (Play/Next: plays the current track when the pin is closed; skips to the next track when the pin is opened) • **LO** (Play+Lock: plays the current track when the pin is closed; locks the front panel keys when the pin is opened) • **LP** (Play+Lock/Pause: plays the current track and locks the front panel keys when the pin is closed; pauses the current track when the pin is opened) • **LN** (Play+Lock/Next: plays the current track and locks the front panel keys when the pin is closed; skips to the next track when the pin is opened) • **SP** (Start/Pause: initiates recording or play the current track when the pin is closed; pauses recording or playback when the pin is opened) • **ST** (Start/Pause/Track: initiates recording when the pin is closed while no recording is in progress; pauses the recording when the pin is opened while currently recording; initiates recording to a new file when the pin is closed while the current recording is paused) • **MT** (Manual Track: Initiates recording to a new file when the pin is closed while the current recording is paused)

Control Commands (Host → DN-700R)			
CATEGORY	**CONTENTS**	**CODE**	**DESCRIPTION**
Other Settings	Create Admin Password	@0PD*xxxx*\r	Sets the admin password, where *xxxx* = a password between 6 and 12 characters. See *Appendix > Acceptable Characters for Serial Communication* for details on which characters can be used in the admin password
	Permit/Forbid Product Manager Control	@0Pd*NN*\r	Determines whether DN-700R can be controlled by the included Denon Professional Product Manager software, where *NN* (the setting) = **00** (allow Product Manager control) or **01** (don't allow Product Manager control)
	Permit/Forbid Product Manager Power Control	@0PP*NN*\r	Determines whether DN-700R can be turned on or off from the included Denon Professional Product Manager software, where *NN* (the setting) = **00** (allow power control) or **01** (don't allow power control)
	Format Media Drive	@023FOMAT\r	Formats the currently selected media source
	Shift	@0Sm*XX*\r	Engages the shift control in order to provide access to secondary functions of DN-700R's other controls, where *XX* = **MO** (momentary: shift will only be engaged while the next control is used) or **LK** (lock: shift will remain engaged until it is manually disengaged)
	Key Lock	@023KL\r	Locks the front panel buttons
	Key Unlock	@023KU\r	Unlocks the front panel buttons
	Lock Transport Buttons	@023KS\r	Locks only the transport buttons on the front panel (**Stop**, **Play**, **Pause**, **Rec**)
	Turn Auto Reboot On/Off	@0Ar*NN*\r	Determines whether DN-700R will automatically reboot when the main processor freezes, where *NN* = **00** (turn auto reboot on) or **01** (turn auto reboot off)
	Change Language	@0KB*XX*\r	Sets the language for the keyboard connected to the USB keyboard input, where *XX* (the language) = **US** (American English), **UK** (British English), **FR** (French), **GE** (German), **IT** (Italian), **SP** (Spanish), **NE** (Dutch), **SW** (Swedish), or **JP** (Japanese)
	Select Preset	@0PS*NN*\r	Selects and applies a settings preset, where *NN* (the settings preset number) = **01**, **02**, or **03**
	Title Preset	@0PN*n:xxxx*\r	Titles the settings preset, where *n* (the settings preset number) = **1**, **2**, or **3**, and *xxxx* (the title) stands for a desired name of up to 32 characters in length. See *Appendix > Acceptable Characters for Serial Communication* for details on which characters can be used in the name of the settings preset
	Load a Settings Preset	@0PVLD\r	Loads the settings preset file in the root folder of the currently selected media source

Control Commands (Host → DN-700R)			
CATEGORY	**CONTENTS**	**CODE**	**DESCRIPTION**
Other Settings	Save Settings as a Preset	@0PVSA\r	Saves the current combination of settings into a preset file on the root folder of the currently selected media source
	Reset System Settings	@0DESY\r	Resets all system settings to their factory default values
	Reset Settings	@0DEFL\r	Resets all preset settings to their default values

Status Request Command Codes/Status Information Codes

Use the status request command codes below to check on the status of your DN-700R. In response, DN-700R will send a corresponding status information code.

In cases where the status request command code includes a variable, the variable is indicated in *italicized font* and the potential values are indicated in **bold font**.

Status Request Commands (Host → DN-700R)		Status Information (DN-700R → Host)		
REQUEST	**CODE**	**ANSWER**	**CODE**	**DESCRIPTION**
Admin Login	@0?LI*xxxx*\r	Success	@0LIOK\r	The entered password was correct, where *xxxx* stands for the password; you are now logged in and able to execute serial commands
		Failed	@0LING\r	The entered password was incorrect, where *xxxx* stands for the password; you will need to try logging in again in order to execute serial commands
Power Status	@0?PW\r	On	@0PW00\r	The power is on
		Standby	@0PW01\r	DN-700R is in standby
		Network Standby	@0PW02\r	DN-700R is in network standby
Power On Mode	@0?PO\r	Resume playback	@0PORM\r	DN-700R is set to resume playback of the last played track when powered on
		Play first track	@0POPF\r	DN-700R is set to play the first track in the last used folder when powered on
		Stop	@0POST\r	DN-700R is set to stop playback when powered on
		Record	@0PORE\r	DN-700R is set to begin recording to the last selected media source when powered on
Source Status	@0?MM\r	Selected media source	@0MM*XX*\r	The currently selected media source, where *XX* (the selected media source) = **US** (USB), **S1** (SD Card 1), **S2** (SD Card 2), or **NE** (the network)
Media Status	@0?CD\r	Card in	@0CDCI\r	There is an SD card in one of the SD slots
		No card	@0CDNC\r	There is no SD card
		Card error	@0CDCE\r	There is an error with the SD card
		Unformatted	@0CDUF\r	The currently selected media source is unformatted
		Write-protected	@0CDWP\r	The currently selected media source is write-protected
		SD door open	@0CDDO\r	The SD slot door is open

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Status Request Commands (Host → DN-700R)		Status Information (DN-700R → Host)		
REQUEST	**CODE**	**ANSWER**	**CODE**	**DESCRIPTION**
Media Size	@0?SF\r	Total capacity of the media drive	@0FE*mmXXXX*\r	The total capacity of the currently selected media source, where *mm* (the media source) = **S1** (SD Card 1), **S2** (SD Card 2), or **US** (USB) and *XXXX* stands for the capacity
Media Free Space	@0?FE\r	SD Card 1	@0FES1*XXXX*	The amount of free space left on SD Card 1, where *XXXX* stands for the free space left
		SD Card 2	@0FES2*XXXX*	The amount of free space left on SD Card 2, where *XXXX* stands for the free space left
		USB drive	@0FEUS*XXXX*	The amount of free space left on the USB drive, where *XXXX* stands for the free space left
Device Status	@0?ST\r	Playing	@0STPL\r	The current track is playing
		A-B repeat	@0STAB\r	The current track is playing (with the A-B repeat feature activated)
		Paused	@0STPP\r	The current track is paused
		Paused (with repeat on)	@0STPR\r	The current track is paused (with the repeat feature is activated)
		Stopped	@0STST\r	The current tracklist is stopped
		Cued	@0STCU\r	A track is currently cued
		Autocueing	@0STAC\r	A track is currently autocued
		Rewinding	@0STRW\r	The current track is rewinding
		Fast forwarding	@0STFF\r	The current track is fast forwarding
		Loading	@0STLD\r	DN-700R is currently loading
		Busy	@0STBY\r	DN-700R is currently busy
		File list open	@0STFL\r	The file list is currently open
		Menu open	@0STED\r	The menu settings are currently open
		Timer standby	@0STSH\r	Pre-scheduled recording or playback is currently in progress
		Error	@0STER\r	There is an operation error
Search Speed	@0?SP\r	Speed value	@0SP*Xnnn*\r	The direction in and speed at which the track is searching, where *X* (the direction) = **R** (rewinding) or **F** (fast-forwarding) and *nnn* (the speed) = **002** (2x), **010** (10x), **050** (50x), **100** (100x), or **200** (200x)
Recording Audio Input	@0?IN\r	Unbalanced	@0INUB\r	The recording audio source is set to the RCA inputs
		Balanced	@0INBA\r	The recording audio source is set to the analog XLR inputs
		Coaxial	@0INDI\r	The recording audio source is set to the coaxial input

Status Request Commands (Host → DN-700R)		Status Information (DN-700R → Host)		
REQUEST	CODE	ANSWER	CODE	DESCRIPTION
Recording Audio Input	@0?IN\r	AES/EBU	@0INDB\r	The recording audio source is set to the AES/EBU input
One Touch Recording Status	@0?OR\r	On	@0OR00\r	One Touch Recording is turned on
		Off	@0OR01\r	One Touch Recording is turned off
Pre-Record Setting	@0?PR\r	Off	@0PR\r	The pre-record timer is turned off
		On	@0PR*n*S\r	The pre-record timer is turned on, where *n* (the length of the timer in seconds) = **1–5**
Recording Folder	@0?Rf\r	Current	@0RfCU\r	DN-700R is set to save new recordings to the currently selected folder
		Fixed	@0RfF*XXXX*\r	DN-700R is set to save new recordings to a specific folder, where *XXXX* stands for the name of the folder
Remaining Record Time	@0?RT\r	Amount of available recording time	@0RT*hhhmmss*\r	The estimated amount of time that DN-700R can record to the currently selected media source before the media source runs out of space, where *hhhmmss* (the amount of time in hours, minutes, and seconds) = **0000001– 9995959**
Recording Volume	@0?RV\r	The recording volume	@0RV*LLRR*\r	The recording volume, where *LL* stands for the left channel volume rounded to the nearest one and *RR* stands for the right channel volume rounded to the nearest one
Recording Volume Type	@0?VI\r	Fixed	@0VIFX\r	The recording input volume is fixed at 0 dB
		Variable	@0VIVA\r	The recording input volume can be adjusted
Record Monitor Setting	@0?Rm\r	On	@0Rm00\r	The record monitor feature is currently set to on
		Off	@0Rm01\r	The record monitor feature is currently set to off
Auto Track Time	@0?AT\r	Auto track time interval setting	@0AT*hhmm*\r	The time interval in which DN-700R is set to split in-progress recordings when the auto-track feature is activated, where *hhmm* (the length of time in hours and minutes) = **0001**, **0005**, **0010**, **0015**, **0030**, **0100**, **0200**, **0600**, **0800**, **1200**, or **2400**; DN-700R will answer with **0000** for the variable if the auto track feature is disactivated

Status Request Commands (Host → DN-700R)		Status Information (DN-700R → Host)		
REQUEST	CODE	ANSWER	CODE	DESCRIPTION
Record Level Type	@0?RI\r	Master volume	@0RIMA\r	The record level knob is set to primarily adjust the volume of the left and right channels; while shift is engaged, the knob will adjust the balance of the left and right channels
		L/R balance	@0RILR\r	The record level knob is set to primarily adjust the volume of the left channel; while shift is engaged, the knob will adjust the volume of the right channel
Auto Level Control (ALC) Type	@0?RL\r	Off	@0RLMA\r	ALC is turned off
Auto Level Control (ALC) Type	@0?RL\r	Separate	@0RLSE\r	ALC is turned on and set to be applied individually to the left and right recording channels
		Mixed	@0RLMI\r	ALC is turned on and set to be applied equally to the left and right recording channels
Dual Recording Status	@0?dR\r	Off	@0dROF\r	Dual recording is turned off
		SD1	@0dRS1\r	Dual recording is turned on and SD Card 1 is set as the backup media
		SD2	@0dRS2\r	Dual recording is turned on and SD Card 2 is set as the backup media
		USB	@0dRUS\r	Dual recording is turned on and USB is set as the backup media
Relay Recording Status	@0?rR\r	Off	@0rROF\r	Relay recording is turned off
		SD1	@0rRS1\r	Relay recording is turned on and SD Card 1 is set as the backup media
		SD2	@0rRS2\r	Relay recording is turned on and SD Card 2 is set as the backup media
		USB	@0rRUS\r	Relay recording is turned on and USB is set as the backup media
Archive Setting	@0?AR\r	Auto	@0ARAT\r	Recorded files are set to be automatically archived as soon as they are finished recording
		Timed	@0ARSC\r	Recorded files are set to be archived on schedule with the archive timer
Archive Setting	@0?AR\r	Off	@0AR01\r	The archive feature is deactivated
Clear After Arc. Setting	@0?CA\r	On	@0CA00\r	DN-700R is set to automatically delete recorded files after they are archived
		Off	@0CA01\r	DN-700R is not set to automatically delete recorded files after they are archived

Status Request Commands (Host → DN-700R)		Status Information (DN-700R → Host)		
REQUEST	CODE	ANSWER	CODE	DESCRIPTION
Auto Deletion Setting	@0?AD\r	Off	@0ADOF\r	DN-700R is not set to automatically delete archived files when the available memory on the current media source becomes limited to a specified amount of record time
		On	@0AD*HH*\r	DN-700R is set to automatically delete archived files when the available memory on the current media source becomes limited to a specified amount of record time, where *HH* (the record time in hours) = **01**, **03**, **06**, **12**, or **24**; enter **OF** for *HH* to deactivate the auto delete feature
Record Channel Setting	@0?CH\r	Stereo	@0CHST\r	DN-700R is set to record stereo files
		Mono (L)	@0CHML\r	DN-700R is set to record left-channel mono files
		Mono mixed	@0CHMX\r	DN-700R is set to record mono-mixed files
Recording File Format	@0?AF\r	PCM	@0AFPM*nn*\r	The file format for recordings is set to PCM, where *nn* stands for the bit rate
		MP3	@0AFM3*nnn*\r	The file format for recordings is set to MP3, where *nnn* (the bit rate in Kbps) = **064**, **128**, **192**, **256**, or **320**
Recording Sample Rate	@0FS*NN*\r	Current sample rate setting	@0FS*NN*\r	The current setting for the recording sample rate, where *NN* (the sample rate) = **44**, **48**, **96** or **EX** (for the AES/EBU input)
File Name Format	@0?Ff\r	MN_DT_UA	@0FfMDU\r	The file name format for recorded files is set to include the machine name first, then the date, then the user area (if applicable)
		MN_UA_DT	@0FfMUD\r	The file name format for recorded files is set to include the machine name first, then the user area (if applicable), then the date
		DT_MN_UA	@0FfDMU\r	The file name format for recorded files is set to include the date first, then the machine name, then the user area (if applicable)
		DT_UA_MN	@0FfDUM\r	The file name format for recorded files is set to include date first, then the user area (if applicable), then the machine name
		UA_MN_DT	@0FfUMD\r	The file name format for recorded files is set to include the user area first (if applicable), then the machine name, then the date

Status Request Commands (Host → DN-700R)		Status Information (DN-700R → Host)		
REQUEST	CODE	ANSWER	CODE	DESCRIPTION
File Name Format	@0?Ff\r	UA_DT_MN	@0FfUDM\r	The file name format for recorded files is set to include the user area first (if applicable), then the date, then the machine name
User Area Name	@0?UA\r	Name of the user area	@0Ua*XXXX*\r	The name of the user area, where *XXXX* stands for the name
User Area Setting	@0?US\r	On	@0US00\r	DN-700R is set to include the user area in the names of recorded files
		Off	@0US01\r	DN-700R is set to exclude the user area from the names of recorded files
Machine Name	@0?MN\r	Current machine name	@0MN*XXXX*\r	The currently set machine name, where *XXXX* stands for the machine name
Track Number	@0?Tr\r	Number of the current track	@0Tr*nnnn*\r	The current track's number within the file list, where *nnnn* (the track number) = **0000–2000**
Tracklist Number	@0?Tt\r	Total number of tracks	@0Tt*nnnn*\r	The total number of tracks in the currently selected folder, where *nnnn* (the total track number) = **0000–2000**
Track Title (current; short)	@0?ti\r	Title of the current track	@0ti*xxxx*\r	The title of the current track, where *xxxx* stands for up to 64 characters of the title
Track Title (current; long)	@0?T1	Title of the current track	@0T1*xxxx*	The title of the current track, where *xxxx* stands for up to 255 characters of the title
Track Title (by 3-digit number)	@0?Tn*NNN*\r	Title of the current track	@0tn*xxxx*\r	The title of the track with the entered file number, where *NNN* (the file number) = **001–999** and *xxxx* stands for up to 64 characters of the title
Track Title (by 4-digit number)	@0?tn*NNNN*\r	Title of the track	@0tn*xxxx*\r	The title of the track with the entered file number, where *NNNN* (the file number) = **0001–2000** and *xxxx* stands for up to 64 characters of the title
Artist Title (short)	@0?at\r	Title of the artist	@0at*xxxx*\r	The title of the artist for the current track, where *xxxx* stands for up to 64 characters of the title
Artist Title (long)	@0?T2	Title of the artist	@0T2*xxxx*	The title of the artist for the current track, where *xxxx* stands for up to 255 characters of the title
Album Title (short)	@0?al\r	Title of the album	@0al*xxxx*\r	The title of the album for the current track, where *xxxx* stands for up to 64 characters of the title
Album Title (long)	@0?T3	Title of the album	@0T3*xxxx*	The title of the album for the current track, where *xxxx* stands for up to 255 characters of the title
Track File Format	@0?af\r	PCM	@0afPM*NN*\r	The current track is a PCM file, where *NN* (the bit length) = **16** or **24**

Status Request Commands (Host → DN-700R)		Status Information (DN-700R → Host)		
REQUEST	CODE	ANSWER	CODE	DESCRIPTION
Track File Format	@0?af\r	WAV	@0afWVNN	The current track is a WAV file, where NN (the bit length) = **16** or **24**
		MP3	@0afM3NNN\r	The current track is an MP3 file, where NNN stands for the bit rate in Kbps
		AIFF	@0afALNN\r	The current track is an AIFF file, where NN (the bit length) = **16** or **24**
		AAC	@0afACNNN\r	The current track is an AAC file, where NNN stands for the bit rate in Kbps
Track Size (by 3-digit number)	@0?Tsnnn\r	File size of the track	@0TsNNNNNN\r	The size of the track, where nnn (the track file number) = **001–999** and NNNNNN (the file size in KB) = **000001–999999**
Track Size (by 4-digit number)	@0?tsnnnn\r	File size of the track	@0tsNNNNNN\r	The size of the track, where nnnn (the track file number) = **0001–2000** and NNNNNN (the file size in KB) = **000001–999999**
Track Sample Rate	@0?fs\r	Sample rate	@0fsNN\r	The sample rate for the current track, where NN (the sample rate in kHz) = **44** (44.1), **48**, or **96**
Total Folder Number	@0?Tf\r	Number of folders	@0Tfnnnn\r	The total number of folders within the selected folder on the media source, where nnnn (the number of folders) = **0000–2000**
Hot Start Number	@0?HP\r	Current track's hot start number	@0HPnn\r	The hot start number for the current track, where nn (the hot start number) = **01–20**
Hot Start File Information	@0?Hsnn\r	Information on the current hot start track	@0Hsnnxxx:HHHmmssttt\r	The details for the current hot start track, where nn (the hot start number) = **00–20**, xxx stands for the file name, and HHHmmssttt (hours, minutes, seconds, and milliseconds elapsed in the track) = **0000000000–9995959999** Note: The file name will start with a number to indicate the media source: **1** for SD and **2** for USB
Track Length	@0?tl\r	Length of the current track	@0tlMMMSSFF\r	The length of the current track, where MMMSSFF (the length in minutes, seconds, and frames) = **0000000–9995999**
Elapsed Track Time	@0?ET\r	Time elapsed in the current track	@0EThhhmmss\r	The amount of time that has elapsed in the current track, where hhhmmss (the amount of time in hours, minutes, and seconds) = **0000000–9995959**
Remaining Track Time	@0?RM\r	Time remaining in the current track	@0RMhhhmmss\r	The amount of time remaining before the current track ends, where hhhmmss (the amount of time in hours, minutes, and seconds) = **0000000–9995959**

Status Request Commands (Host → DN-700R)		Status Information (DN-700R → Host)		
REQUEST	CODE	ANSWER	CODE	DESCRIPTION
Folder Name (current)	@0?SF\r	Name of the selected folder	@0SF*DXXX*\r	The name of the folder containing the current track, where *D* (media source indicator) = **1–2** and *XXX* stands for the folder name <u>Note</u>: 1 indicates SD and 2 indicates USB
Folder Name (by number)	@0?Fn*xxxx*\r	Name of the folder	@0Fn*XXX*\r	The name of the folder corresponding to the entered folder number, where *xxxx* (the folder number) = **0001–2000** and *XXX* stands for the folder name
File Sort Setting	@0?FR\r	Alphabetically	@0FRAL\r	Files in any folder are set to be sorted alphabetically
		By date	@0FRDA\r	Files in any folder are set to be ordered by date
File List Status	@0?UL\r	Not changed	@0UL00\r	The file list in the current folder has not been changed since the last query
		Updated	@0UL01\r	The file list in the current folder has been changed since the last query
Playback Range	@0?pR\r	All	@0pRAL\r	DN-700R is set to include all tracks on the selected media source in the current tracklist
		Folder	@0pRFD\r	DN-700R is set to include only tracks from the selected folder in the current tracklist
Playback Mode	@0?PM\r	Single Play	@0PMSP\r	DN-700R is set to stop playback after the currently playing track ends
		Continuous	@0PMCN\r	DN-700R is set to continuously play through all tracks in the current tracklist
Random Setting	@0?RN\r	On	@0RN01\r	Random playback is activated
		Off	@0RN00\r	Random playback is disactivated
Repeat Setting	@0?RE\r	On	@0RE00\r	The repeat feature is turned on
		Off	@0RE01\r	The repeat feature is turned off
Program List Setting	@0?PG\r	Off	@0PG00\r	No program list is loaded and set for playback
		On	@0PG01\r	DN-700R is set to play the currently loaded program list
Total Program Lists	@0?tP	Number of program lists	@0tP*nn*	The total number of saved program lists, where *nn* = **00–99**
Program List Name	@0?pl*nn*	Name of the program list	@0pl*xxxx*	The file name of the program list corresponding to the entered program list number, where *nn* (the program list number) = **00–99** and *xxxx* stands for the file name
Finish Mode	@0?FM\r	Stop	@0FMST\r	DN-700R is set to standby at the start of the current tracklist upon executing the stop command

Status Request Commands (Host → DN-700R)		Status Information (DN-700R → Host)		DESCRIPTION
REQUEST	CODE	ANSWER	CODE	DESCRIPTION
Finish Mode	@0?FM\r	Next	@0FMNT\r	DN-700R is set to cue the next track in the tracklist upon executing the stop command
		Recue	@0FMRC\r	DN-700R is set to skip to the point at which playback was previously started upon executing the stop command
Auto Cue Setting	@0?AC\r	Off	@0AC00\r	The auto cue feature is turned off
		On	@0AC*NN*\r	DN-700R is set to skip audio in the beginning of tracks that is below a specific volume threshold, where *NN* (the volume threshold in –dB) = **36**, **42**, or **48**
Recording Input Routing (Signal Pass Thru Setting)	@0?Sp\r	Unchanged	@0Sp00\r	DN-700R is set to route the recording input signal through the audio outputs
		Changed	@0Sp01\r	DN-700R is set to not route the recording input signal through the audio outputs
Recording Timer Setting	@0?Sh*NN*\r	Recording scheduled by day(s) of the week	@0ShDW*xxxxxxx HHMMhhmmUU UUU*\r	The scheduled recording is set at a specific day and time: • *NN* (the record timer setting number) = **01**–**30** • *xxxxxxx* (the day or days of the week) = **SMTWTFS** and/or **_**; see note below for details • *HHMM* (the start time in hours and minutes) = **0000**–**2359** • *hhmm* (the duration of the recording in hours and minutes) = **0000**–**2359** • *UUUUU* stands for a user area name of up to 32 characters Note: For the *xxxxxxx* variable, **_** indicates that the corresponding day of the week will be skipped Note: For the *HH* variable, ** indicates hourly scheduling

Status Request Commands (Host → DN-700R)		Status Information (DN-700R → Host)		
REQUEST	**CODE**	**ANSWER**	**CODE**	**DESCRIPTION**
Recording Timer Setting	@0?Sh*NN*\r	Recording scheduled by date and time	@0ShDT*YYMMDDHHMMhhmmUUUUU*\r	The scheduled recording is set at a specific time and date: • *NN* (the record timer setting number) = **01–30** • *YYMMDD* (the year, month, and date to start recording) = **130101–351231** • *HHMM* (the start time in hours and minutes) = **0000–2359** • *hhmm* (the duration of the recording in hours and minutes) = **0000–2359** • *UUUUU* stands for a user area name of up to 32 characters <u>Note</u>: An entry of ****** for the *YY* variable indicates annual scheduling; an entry of ****** for the *MM* variable indicates monthly scheduling
Playback Timer Setting	@0?TP*NN*\r	Playback scheduled by day(s)	@0TPDW*xxxxxxx hhmmFFFF*\r	The scheduled playback is set at a specific day and time: • *NN* (the playback timer setting number) = **01–30** • *xxxxxxx* (the day or days of the week) = **SMTWTFS** and/or **_**; see note below for more details • *hhmm* (the start time in hours and minutes) = **0000–2359** • *FFFF* stands for the name of the file to be played <u>Note</u>: For the *xxxxxxx* variable, an entry of **_** indicates that the corresponding day will be skipped <u>Note</u>: For the *HH* variable, an entry of ****** indicates hourly scheduling
		Playback scheduled by date and time	@0TPDT*YYMMDDhhmmFFFF*\r	The scheduled playback is set at a specific time and date: • *NN* (the playback timer setting number) = **01–30** • *YYMMDD* (the year, month, and date to start playback) = **130101–351231** • *hhmm* (the start time in hours and minutes) = **0000–2359** • *FFFF* stands for the name of the file to be played <u>Note</u>: An entry of ****** for the *YY* variable indicates annual scheduling; an entry of ****** for the *MM* variable indicates monthly scheduling

Status Request Commands (Host → DN-700R)		Status Information (DN-700R → Host)		
REQUEST	CODE	ANSWER	CODE	DESCRIPTION
Archive Timer Setting	@0?as\r	Archiving scheduled by day(s)	@0asDW*xxxxxxxhhmm*\r	The scheduled archiving is set at a specific day and time: • *xxxxxxx* (the day or days of the week that the archiving will take place) = **SMTWTFS** and/or **_**; see note below for details • *HHMM* (the time that the archiving will take place in hours and minutes) = **0000–2359** <u>Note</u>: For the *xxxxxxx* variable, an entry of _ indicates that the corresponding day will be skipped <u>Note</u>: For the *HH* variable, an entry of ** indicates hourly scheduling
		Archiving scheduled by date and time	@0asDT*YYMMDDhhmm*\r	The scheduled archiving is set at a specific time and date, where *YYMMDD* (the year, month, and date to archive the files) = **130101–351231** and *hhmm* (the time to archive the files in hours and minutes) = **0000–2359** <u>Note</u>: An entry of ** for the *YY* variable indicates annual scheduling; an entry of ** for the *MM* variable indicates monthly scheduling
Current Timer	@0?Ct\r	Record timer	@0CtRE*nn*\r	The current record timer, where *nn* (the record timer number) = **01–30**
		Playback timer	@0CtPL*nn*\r	The current playback timer, where *nn* (the playback timer number) = **01–30**
Reserved Timer	@0?Rt\r	Record timer	@0RtRE*nn*\r	The reserved record timer, where *nn* (the record timer number) = **01–30**
		Playback timer	@0RtPL*nn*\r	The reserved playback, where *nn* (the playback timer number) = **01–30**
Timer Priority	@0?tp\r	On	@0tp00\r	Scheduled playback will start as long as recording is not in progress
		Off	@0tp01\r	Scheduled playback will only start if DN-700R is paused, stopped, or in standby

Status Request Commands (Host → DN-700R)		Status Information (DN-700R → Host)		
REQUEST	CODE	ANSWER	CODE	DESCRIPTION
Pitch/Speed	@0?PT\r	Pitch/speed setting	@0PT*SS**XXXX*\r	The current pitch/speed setting, where *SS* (the pitch-control on/off setting) = **ON** or **OF** and *XXXX* (the pitch/speed value as a percentage of the default pitch/speed between –16% and 16%) = **1160–0160** Note: In the *XXXX* variable, a first digit of 0 makes the percentage positive, a first digit of 1 makes the percentage negative, and the last three digits are the pitch/speed value in multiples of 0.1% For example, if the pitch/speed is currently set to +14.5%, DN-700R will answer with this code: @0PTON0145; if the pitch/speed is currently set to –8.0%, DN-700R will answer with this code: @0PTON1080
Master Key	@0?KY\r	On	@0KY00\r	DN-700R is set so that using the pitch/speed control will only change the speed
		Off	@0KY01\r	DN-700R is set so that using the pitch/speed control will change both the speed and pitch
Mark Number	@0?Tm\r	Total mark number	@0Tm*NN*\r	The total number of marks in the current track, where *NN* = **00–99**
Mark Time	@0?Mt*nn*\r	Time position of the mark	@0Mt*hhmmssff*\r	The time position of the mark, where *nn* (the mark number) = **00–30** and *hhmmssff* (the time position of the mark in hours, minutes, seconds, and frames) = **00000001–99595999**
Auto Mark Setting	@0?AM\r	On	@0AM00\r	The auto mark feature is activated
		Off	@0AM01\r	The auto mark feature is disactivated
Silent Skip Setting	@0?SS\r	On	@0SS00\r	The silent skip feature is activated
		Off	@0SS01\r	The silent skip feature is disactivated
Skip Back Time	@0?SB\r	Amount of skip back time	@0SB*NNN*\r	The number of seconds that a track will rewind when Skip Back is executed, where *NNN* (the number of seconds in multiples of 0.1) = **005–600** (0.5 second – 60 seconds)
Auto Fade In Setting	@0?FI\r	Amount of fade in time	@0FL*nn*\r	How long a track will fade in when playback is initiated, where *nn* (the length of the fade) = **00** (off/no fade in), **05** (500 milliseconds), **10** (1 second), or **30** (3 seconds)

Status Request Commands (Host → DN-700R)		Status Information (DN-700R → Host)		
REQUEST	CODE	ANSWER	CODE	DESCRIPTION
Auto Fade Out Setting	@0?FO\r	Amount of fade out time	@0FO*nn*\r	How long a track will fade out before playback ends, where *nn* (the length of the fade) = **00** (off/no fade out), **05** (500 milliseconds), **10** (1 second), or **30** (3 seconds)
Playback Delay Setting	@0?sD\r	Amount of delay time	@0sD*nnn*\r	How long of a delay there will be after track playback is initiated, where *nnn* (the length of the delay) = **000** (off/no delay), **010** (100 milliseconds), **020** (200 milliseconds), or **030** (300 milliseconds)
End of Message Setting	@0?ED\r	End of message time	@0ED*NN*\r	Sets how long before the end of a track it will take before the "End of Message" icon displays, where *nn* (the length of time in seconds) = **00**, **05**, **10**, **15**, **20**, **30**, **60**, or **OF** (turns the EOM feature off)
Track Channel	@0?ch\r	Stereo	@0chST\r	The current track is a stereo file
		Mono	@0chMO\r	The current track is a mono file
Search Mode	@0?sM\r	Audible	@0sMNO\r	Tracks will be audible while searching
		Silent	@0sMSL\r	Tracks will be silent while searching
Mono Playback Setting	@0?MO\r	On	@0MO00\r	DN-700R is set to playback audio in mono
		Off	@0MO01\r	DN-700R is not set to playback audio in mono
Audio Output Rate	@0?dF\r	Auto	@0dFAT\r	The audio output sample rate is set to automatic (the sample rate will automatically match that of the input source/file)
		44.1 kHz	@0dF44\r	The audio output sample rate is set to 44.1 kHz
		48 kHz	@0dF48\r	The audio output sample rate is set to 48 kHz
		Ext (AES)	@0dFEX\r	The audio output sample rate will be set using an external clock for the digital signal
Left Channel Input Adjustment	@0?ltL\r	Amount of volume adjustment	@0ltL*YNN*\r	The amount of dB that the left channel input is set to be lowered or raised, where *YNN* (the volume adjustment in multiples of 0.1 dB) = **-20 – +20** For example, if the left channel input is set to be increased by 1.5 dB, DN-700R will answer with this code: @0ltL+15
Right Channel Input Adjustment	@0?ltR\r	Amount of volume adjustment	@0ltR*YNN*\r	The amount of dB that the right channel input is set to be lowered or raised, where *YNN* (the volume adjustment in multiples of 0.1 dB) = **-20 – +20**

Status Request Commands (Host → DN-700R)		Status Information (DN-700R → Host)		
REQUEST	CODE	ANSWER	CODE	DESCRIPTION
Left Channel Output Adjustment	@0?OtL\r	Amount of volume adjustment	@0OtLYNN\r	The amount of dB that the left channel output is set to be lowered or raised, where YNN (the volume adjustment in multiples of 0.1 dB) = **-20 – +20**
Right Channel Output Adjustment	@0?OtR\r	Amount of volume adjustment	@0OtRYNN\r	The amount of dB that the right channel output is set to be lowered or raised, where YNN (the volume adjustment in multiples of 0.1 dB) = **-20 – +20**
XLR Left Channel Input Voltage Level	@0?LML\r	Line	@0LMLLN\r	The XLR left channel input is set to line level
		Mic	@0LMLMC\r	The XLR left channel input is set to mic level
XLR Right Channel Input Voltage Level	@0?LMR	Line	@0LMRLN\r	The XLR right channel input is set to line level
		Mic	@0LMRMC\r	The XLR right channel input is set to mic level
Phantom Power Setting (XLR Left Channel Input)	@0?PhL\r	On	@0PhL00\r	Phantom power is turned on for the XLR left channel input
		Off	@0PhL01\r	Phantom power is turned off for the XLR left channel input
Phantom Power Setting (XLR Right Channel Input)	@0?PhR	On	@0PhR00\r	Phantom power is turned on for the XLR right channel input
		Off	@0PhR01\r	Phantom power is turned off for the XLR right channel input
Mic Input Sensitivity (Left Channel)	@0?MsL\r	Sensitivity Value	@0MsLNN\r	The mic input sensitivity setting for the XLR left channel input, where NN (the mic input sensitivity level in –dBu) = **16– 60**
Mic Input Sensitivity (Right Channel)	@0?MsR\r	Sensitivity Value	@0MsRNN\r	The mic input sensitivity setting for the XLR right channel input, where NN (the mic input sensitivity level in –dBu) = **16– 60**
Reference Value (XLR/RCA)	@0?Fr\r	Reference Value	@0FrNN\r	The reference value, where NN = **24** (+24 dBu for XLR / +10 dBv for RCA), **20** (+20 dBu for XLR / +6 dBv for RCA), or **18** (+18 dBu for XLR / +4 dBv for RCA)
FTP (Archive) Server IP Address	@0?AI\r	IP address of the archive network	@0AInnnn\r	The IP address for the network to which archived recordings will be saved, where nnnn stands for the IP address (omitting periods)
FTP (Archive) Server User Name	@0?AU\r	User name for the archive network	@0AUxxxx\r	The currently set user name for the network to which archived recordings will be saved, where xxxx stands for the user name
FTP (Archive) Server Folder	@0?AO\r	Archive network folder	@0AOxxxx\r	The currently set folder in which archived recordings will be saved, where xxxx stands for the folder name

Status Request Commands (Host → DN-700R)		Status Information (DN-700R → Host)		
REQUEST	CODE	ANSWER	CODE	DESCRIPTION
Device IP Address	@0?IP\r	DN-700R's IP address	@0Ip*nnnn*\r	DN-700R's assigned IP address, where *nnnn* stands for the IP address (omitting periods)
Subnet Mask	@0?SM\r	Subnet mask number	@0SM*nnnn*\r	DN-700R's assigned subnet mask, where *nnnn* stands for the subnet mask number (omitting periods)
Gateway Address	@0?GW\r	Gateway address number	@GW*nnnn*\r	DN-700R's assigned gateway address, where *nnnn* stands for the address number (omitting periods)
DNS Server Address	@0?DN\r	DNS server address number	@0DN*nnnn*\r	DN-700R's assigned DNS server address, where *nnnn* stands for the address number (omitting periods)
IP Control Port	@0?Ip\r	Current control port number	@0Ip*NNNNN*\r	The currently set IP control port number, where *NNNNN* (the number) = **00000–65535**
NTP Server	@0?NP\r	NTP server address number	@0NP*nnnn*\r	The currently set NTP server address, where *nnnn* stands for the address number (omitting periods)
NTP Cycle	@0?NC\r	Cycle time	@0NC*hhmm*\r	The currently set NTP cycle time in hours and minutes, where *hhmm* (the cycle time in hours and minutes) = **0015–2400**
Syslog	@0?Sl\r	Syslog address number	@0SL*nnnn*\r	The syslog server address, where *nnnn* stands for the address number (omitting periods)
IP Authentication Setting	@0?Ia\r	On	@0Ia00\r	DN-700R's web remote control is currently set to require a password
		Off	@0Ia01\r	DN-700R's web remote control is currently set to not require a password
Update File Transfer for IP Remote	@0?UT*xxxx*\r	OK	@0UTOK\r	Stop mode only, where *xxxx* stands for the update file size
		NG	@0UTNG\r	Excluding stop, where *xxxx* stands for the update file size
Network Standby Setting	@0?Ns\r	On	@0Ns00\r	DN-700R is set so that it can be controlled from the web remote when it is in standby
		Off	@0Ns01\r	DN-700R is set so that it cannot be controlled from the web remote when it is in standby
Lock Status	@0?LS\r	Locked	@0LSLK\r	The front panel buttons are currently locked
		Unlocked	@0LSUL\r	The front panel buttons are currently unlocked
		Semi-locked	@0LSSL\r	The front panel buttons are partially locked

Status Request Commands (Host → DN-700R)		Status Information (DN-700R → Host)		
REQUEST	CODE	ANSWER	CODE	DESCRIPTION
Shift Mode	@0?Sm\r	Momentary	@0SmMO\r	The shift control is momentarily engaged and will disengage after the next control is used
		Locked	@0SmLK\r	The shift control will remain engaged until it is manually disengaged
Auto Reboot Setting	@0?Ar\r	On	@0Ar00\r	DN-700R is set to automatically reboot if the main processor freezes
		Off	@0Ar01\r	DN-700R is not set to automatically reboot if the main processor freezes
Date Format	@0?DF\r	MDY	@0DFMD\r	The display is set to show the date in month/day/year format
		DMY	@0DFDM\r	The display is set to show the date in day/month/year format
		YMD	@0DFYM\r	The display is set to show the date in year/month/day format
Date & Time	@0?Dt\r	Current date and time	@0Dt*YYMMDDhhmm*\r	The current date and time setting on DN-700R, where *YYMMDD* (the year, month, and day of the month) = **130101––351231** and *hhmm* (the time in hours and minutes) = **0000–2359**
Time Zone	@0?TZ\r	Current time zone setting	@0TZ*xHHMM*\r	DN-700R's currently set time zone, where *x* (the offset direction) and *HHMM* (the offset amount in hours and minutes) = **-1200 – +1400**; **+0000** is GMT
Time Notation Setting	@0?TF\r	12H	@0TF12\r	The display is set to show the time in a 12-hour AM/PM clock format
		24H	@0TF24\r	The display is set to show the time in a 24-hour clock format
Time Display	@0?TD\r	HH:MM:SS	@0TDHMS\r	The clock on the display is formatted as hours:minutes:seconds
		MMM:SS:FF	@0TDMSF\r	The clock on the display is formatted as minutes:seconds:frames
Daylight Savings Setting	@0?dS\r	On	@0dS00\r	DN-700R is set to observe daylight savings time
		Off	@0dS01\r	DN-700R is set to not observe daylight savings time
Daylight Savings Offset	@0?do\r	Daylight savings offset time	@0do*hhmm*\r	The daylight savings offset time, where *hhmm* (the offset time in hours and minutes) = **0000–0600**
Daylight Savings Start	@0?ds\r	Daylight savings start date/time	@0ds*MMDDhhmm*\r	The date and time that DN-700R will begin observing daylight savings time, where *MMDD* (the date) = **0101–1231** and *hhmm* (the time) = **0000–2359**

Status Request Commands (Host → DN-700R)		Status Information (DN-700R → Host)		
REQUEST	CODE	ANSWER	CODE	DESCRIPTION
Daylight Savings End	@0?de\r	Daylight savings end date/time	@0de*MMDDhhmm*\r	The date and time that DN-700R will stop observing daylight savings time, where *MMDD* (the date) = **0101**–**1231** and *hhmm* (the time) = **0000**–**2359**
Dimmer Setting	@0?DM\r	On	@0DM00\r	The dimmer is turned on
		Off	@0DM01\r	The dimmer is turned off
Display Brightness	@0?DD\r	Display brightness percentage	@0DD*NN*\r	The brightness of the display screen, where *NN* (the brightness setting) = **00** (100%), **01** (75%), **02** (50%), **03** (25%), or **04** (0%)
LED Brightness	@0?LD\r	LED brightness percentage	@0LD*NN*\r	The brightness of the LEDs, where *NN* (the brightness setting) = **00** (100%), **01** (75%), **02** (50%), or **03** (25%)
Display Contrast	@0?BN\r	Contrast value	@0BN*NN*\r	The contrast level for the display, where *NN* (the contrast level) = **01**–**05**
Screen Saver Setting	@0?Ss\r	On	@0Ss00\r	The screen saver feature is turned on
		Off	@0Ss01\r	The screen saver feature is turned off
Parallel Input Hot Start Function	@0?PA\r	Play	@0PAHT\r	When in Hot Start Mode, a parallel remote will play hot start tracks upon selection
		Cue	@0PAHC\r	When in Hot Start Mode, a parallel remote will cue hot start tracks upon selection
Fader Start Pin Setting (Normal Mode Parallel Control)	@0?FD\r	Play	@0FDPL\r	Plays the current track when the pin is closed
		Play/Pause	@FDPU\r	Plays the current track when the pin is closed; pauses the current track when the pin is opened
		Play/Next	@0FDNE\r	Plays the current track when the pin is closed; skips to the next track when the pin is opened
		Play+Lock	@0FDLO\r	Plays the current track when the pin is closed; locks the front panel keys when the pin is opened
		Play+Lock/Pause	@0FDLP\r	Plays the current track and locks the front panel keys when the pin is closed; pauses the current track when the pin is opened
		Play+Lock/Next	@0FDLN\r	Plays the current track and lock the front panel keys when the pin is closed; skips to the next track when the pin is opened
		Start/Pause	@0FDSP\r	Initiates recording or play the current track when the pin is closed; pauses recording or playback when the pin is opened

Status Request Commands (Host → DN-700R)		Status Information (DN-700R → Host)		
REQUEST	CODE	ANSWER	CODE	DESCRIPTION
Fader Start Pin Setting (Normal Mode Parallel Control)	@0?FD\r	Start/Pause/ Track	@0FDST\r	Initiates recording when the pin is closed while no recording is in progress; pauses the recording when the pin is opened while currently recording; initiates recording to a new file when the pin is closed while the current recording is paused
		Manual Track	@0FDMT\r	Initiates recording to a new file when the pin is closed while the current recording is paused
Product Manager Detection	@0?Pd\r	On	@0Pd00\r	DN-700R is set so that it can be controlled through the included Denon Professional Product Manager software
		Off	@0Pd01\r	DN-700R is set so that it cannot be controlled through the included Denon Professional Product Manager software
Product Manager Power Control Setting	@0?PP\r	On	@0PP00\r	DN-700R is set so that it can be powered on from the included Denon Professional Product Manager software
		Off	@0PP01\r	DN-700R is set so that it cannot be powered on from the included Denon Professional Product Manager software
RC-F400S Update File	@0?UF\r	OK	@0UFOK\r	OK
		NG	@0UFNG\r	NG
RC-F400S Update Data	@0?UD\r	File information	@0UD*XXXX*\r	*XXXX* stands for the file information
		NG	@0UD\r	NG
Language	@0?LN\r	English	@0LNUS\r	The system language is currently set to English
		Japanese	@0LNJP\r	The system language is currently set to Japanese
Keyboard Language	@0?KB\r	English (US)	@0KBUS\r	The keyboard language is set to American English
		English (UK)	@0KBUK\r	The keyboard language is set to British English
		French	@0KBFR\r	The keyboard language is set to French
		German	@0KBGE\r	The keyboard language is set to German
		Italian	@0KBIT\r	The keyboard language is set to Italian
		Spanish	@0KBSP\r	The keyboard language is set to Spanish
		Dutch	@0KBNE\r	The keyboard language is set to Dutch
		Swedish	@0KBSW\r	The keyboard language is set to Swedish
		Japanese	@0KBJP\r	The keyboard language is set to Japanese

Status Request Commands (Host → DN-700R)		Status Information (DN-700R → Host)		
REQUEST	CODE	ANSWER	CODE	DESCRIPTION
Preset Number	@0?PS\r	Number of the preset setting	@0PS*NN*\r	The number of the currently selected preset setting, where *NN* = **01–03**
Preset Title	@0?PN*n*\r	Title of the preset setting	@0PN*nxxxx*\r	The name of the preset setting, where *n* (the preset setting number) = **1–3** and *xxxx* stands for up to 32 characters of the name
Version	@0?VN\r	Version/model	@0VN*nnnnnnnnM MMM*\r	The eight-digit version number and model name for your device, where *nnnnnnnn* stands for the version number and *MMMM* stands for the model name

Automatic Status Information Codes

In the event that a change is made to DN-700R from the device itself, DN-700R may automatically send status information to the host. See below for the status information codes that can be automatically sent to the host.

CATEGORY	CONTENTS	CODE	DESCRIPTION
Automatic Status Information **(Host → DN-700R)**			
Media Selection	USB	@0MEUS\r	The USB drive was selected as the current media source
	SD1	@0MES1\r	SD Card 1 was selected as the current media source
	SD2	@0MES2\r	SD Card 2 was selected as the current media source
	Network	@0MENE\r	The network was selected as the current media source
Media Status	SD Card In	@0CDCI\r	An SD card was inserted into one of the SD slots
	SD Card Out	@0CDNC\r	The SD card was ejected
	SD Card Error	@0CDCE\r	There was an error with the SD card
	Unformatted SD Card	@0CDUF\r	An unformatted SD card was inserted into one of the SD slots
	Write Protected SD Card	@0CDWP\r	A write protected SD card was inserted into one of the SD slots
	SD Card Door Opened	@0CDDO\r	The SD slot door was opened
Device Status	Recording	@0STRE\r	A recording was started
	Recording Paused	@0STRP\r	The current recording was paused
	DIR Unlocked	@0STRU\r	With the recording audio source set to one of the digital inputs, the digital interface receiver was unlocked
	Playing	@0STPL\r	Playback of the current track was initiated
	Paused	@0STPP\r	The current track was paused
	Repeat Paused	@0STPR\r	The current track was paused (and the repeat feature is activated)
	Rewinding	@0STRW\r	The current track is being rewound
	Fast Forwarding	@0STFF\r	The current track is being fast forwarded
	Stopped	@0STST\r	The current tracklist was stopped
	Cued	@0STCU\r	A track was cued
	Autocueing	@0STAC\r	A track was autocued
	Timer Standby	@0STSH\r	Pre-scheduled recording or playback was automatically initiated
	Loading	@0STLD\r	DN-700R is currently loading
	Busy	@0STBY\r	DN-700R is currently busy
	File List Opening	@0STFL\r	The file list was opened

Automatic Status Information (Host → DN-700R)			
CATEGORY	**CONTENTS**	**CODE**	**DESCRIPTION**
Device Status	Main Menu Opening	@0STED\r	The main menu was opened
	Error	@0STER\r	There is an operation error
File/Folder Selection	Track Change	@Tr*NNNN*\r	The current track was changed, where *NNNN* (the file number for the newly selected track) = **0001–2000**
	Folder Change	@0SF*XXXX*\r	The currently selected folder was changed, where *XXXX* stands for the name of the newly selected folder
	Total Track Number Change	@0Tt*NNNN*\r	The total number of tracks in the currently selected folder was changed, where *NNNN* (the new number of tracks in the currently selected folder) = **0001–2000**
	Total Folder Number	@0Tf*NNNN*\r	The total number of folders within the currently selected folder on the current media source was changed, where *NNNN* (the new number of folders) = **0000–2000**
Error	Device Error	@0ER*nnxxxx*\r	There is an error with the device, where *xxxx* stands for the error code and *nn* (the number of seconds that the error will be shown on the display screen) = **01–99**; if **00** is shown for the *nn* variable, the display will show the error until the error is resolved

Appendix

Acceptable Characters for Serial Communication

The table below lists all the characters that are allowed in serial communication between the host and DN-700R. Use this table to determine which characters are acceptable for command codes requiring you to create a name (such as a folder or file name).

	X0	X1	X2	X3	X4	X5	X6	X7	X8	X9	XA	XB	XC	XD	XE	XF
0X																
1X																
2X	*SP*	!	"	#	$	%	&	'	(	)	*	+	,	-	.	/
3X	0	1	2	3	4	5	6	7	8	9	:	;	<	=	>	?
4X	@	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
5X	P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^	_
6X	`	a	B	c	D	e	f	g	h	I	j	k	l	m	n	o
7X	p	q	R	s	T	u	v	w	x	Y	z	{	|	}	~	*DEL*
8X																
9X																
AX	*NBSP*	¡	¢	£	¤	¥	¦	§	¨	©	ª	«	¬	-	®	¯
BX	°	±	²	³	´	µ	¶	·	¸	¹	º	»	¼	½	¾	¿
CX	À	Á	Â	Ã	Ä	Å	Æ	Ç	È	É	Ê	Ë	Ì	Í	Î	Ï
DX	Ð	Ñ	Ò	Ó	Ô	Õ	Ö	×	Ø	Ù	Ú	Û	Ü	Ý	Þ	ß
EX	à	á	â	ã	Ä	å	æ	ç	è	É	ê	ë	ì	í	î	ï
FX	ð	ñ	ò	ó	Ô	õ	ö	÷	ø	Ù	ú	û	ü	ý	þ	ÿ

Note: For the "Create Admin Password," "Create Operator Password," and "Create Observer Password" control commands (@0PD*xxxx*), the acceptable characters for the *xxxx* variable are only those between 0x21 and 0x7E (with the further exception of 0x3A).

Note: For the "Create FTP (Archive) Server User Name" and "Create FTP (Archive) Server Password" control commands, the acceptable characters for the *xxxx* variable are only those between 0x20 and 0x7E (with the further exceptions of 0x3A and 0x22).

Note: For the "Edit Machine Name" control command (@0MN*xxxx*), the acceptable characters for the *xxxx* variable are only those which are alphanumeric, 0x2D, and 0x5F.

Entering the Absolute Path for Folder and File Names

For control command codes that require you to enter a folder or file name, you may or may not have to enter the absolute path. This is indicated in the descriptions for applicable control command codes as "absolute path required" or "absolute path not required."

When the absolute path is required, the location of the folder or file in the currently selected media source's root folder must be specified in the entered folder or file name. The separator used to distinguish between folders within the path must be 0x2F (/). Also, all absolute paths must begin with 0x2F (/) in order to signify the root directory.

For example, if you were to assign a hot start number of 05 to a track file named "Song1" in the "Rock" folder within the "Music" folder on the root directory, you will need to enter the control command code @0Hs*nnXXXX*. *nn* stands for the hot start number, and *XXXX* stands for the track file name with the absolute path required. Therefore, the complete code you would need to enter would be **@0Hs05/Music/Rock/Song1\r**.

When the absolute path is not required, enter only the name of the folder or file (and do not include its location in the currently selected media source's root folder).

RS-232C Specifications

Compatible Connector	9-Pin D-sub Male	
Transmission System	Asynchronous Full Duplex	
Transfer Rate	9600 or 38400 bps	
Data Length	8 bits	
Parity	None	
Start Bit	1 bit	
Stop Bit	1 bit	
Flow Control	None	
Maximum Data Length	600 bytes	
Pin Arrangement	Pin Number	Signal Name
	1	Ground
	6	NC
	2	TxD
	7	RTS*
	3	RxD
	8	NC
	4	NC
	9	NC
	5	S. Ground

*4 V / 500 mA power supply can be used for RTS.

Ethernet Specifications

Compatible Connector	RJ45 Male
Transmission System	Full Duplex
Transfer Rate	10 Mbps / 100 Mbps
TCP Port Number	23 (telnet)
Maximum Data Length	288 bytes

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