DENON
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DN-500R

Serial Command Protocol Guide
English

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Introduction

Thank you for purchasing the DN-500R. 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 RS-232C serial remote control, a "host" machine such as a PC can be used to operate your DN-500R. Throughout this document, the equipment used to control DN-500R 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-500R

For serial remote control, you must first connect the host to your DN-500R. Use an RS-232C Straight Cable (9-Pin D-Sub Male) to connect the RS-232C input on the rear panel of your DN-500R to the corresponding input on the host. Make sure that the host is installed with proper software for serial communication.

RS-232C Straight Cable

Personal Computer

RS-232C   PARALLEL   AC IN
REMOTE

DN-500R Rear Panel
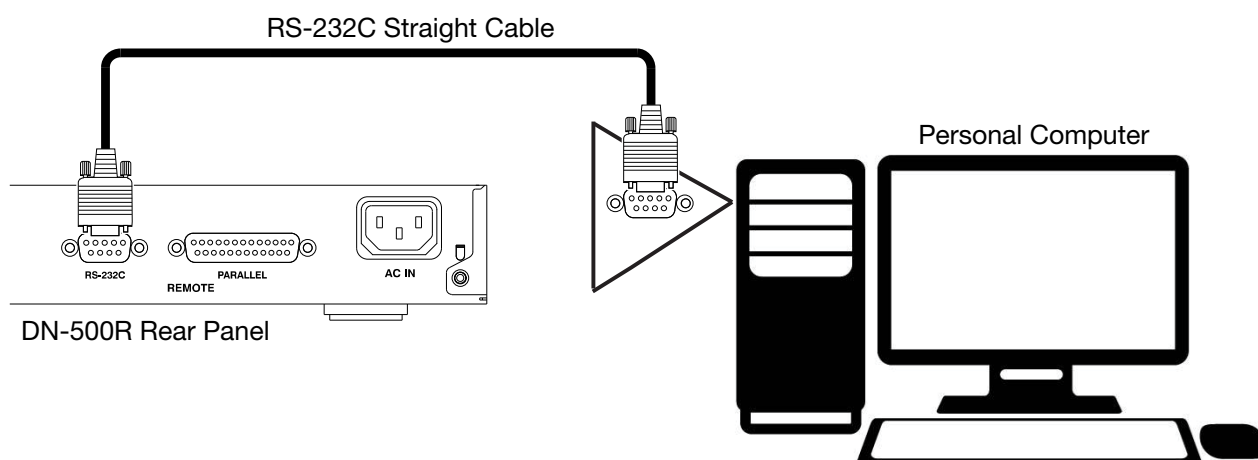
Communication Protocol

Types of Serial Communication

Three types of serial communication can be transmitted between the host and DN-500R:

1. Control commands sent to DN-500R from the host

You can use control commands to make DN-500R perform a desired function (such as initiating a recording or playing a track).

When DN-500R receives a control command from the host, DN-500R sends an ACK signal to the host and then executes the command.

DN-500R	Host
	Control Command
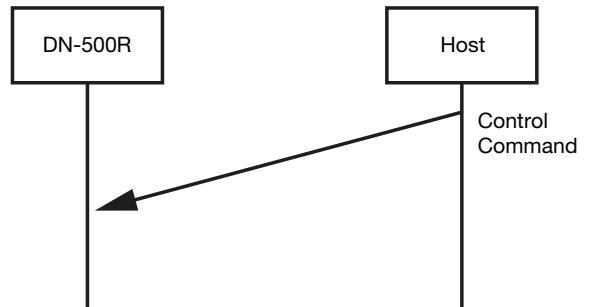
2. Status request commands sent to DN-500R from the host

You can use a status request command to determine the current state of one of DN-500R's components (such as the amount of free space left on the media source or the currently selected recording input).

When DN-500R receives a status request command from the host, DN-500R answers the host with an ACK signal followed by the requested status information.

DN-500R	Host
	Status Request Command
Status Information	
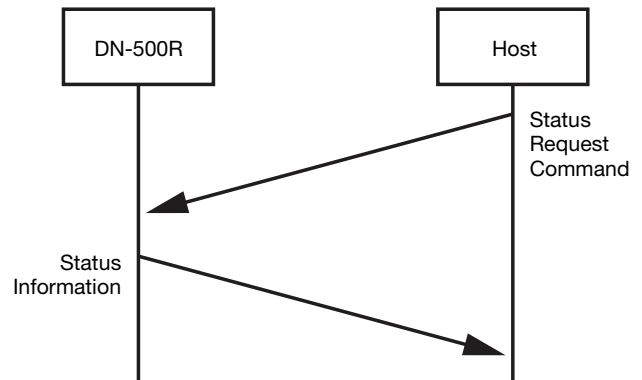
3. Status information automatically sent to the host when a change is made from DN-500R

When certain changes to DN-500R are made from the device itself, DN-500R automatically sends status information to the host. When the host receives automatic status information successfully, it sends an ACK signal to DN-500R.

DN-500R	Host
Status Information	
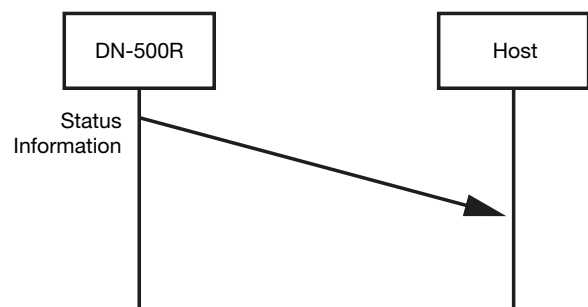
Structure of the Codes

Serial communication between the host and DN-500R 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-500R

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-500R is **@023PW\r**:

Command

Start Character   @0 | 23PW | \r   End Character
+ ID
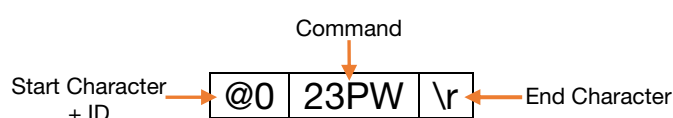
Rules on Transmitting Command Codes

- When DN-500R receives a control command or status request command from the host, DN-500R should respond within 300 ms.

- When DN-500R successfully executes a command that it receives from the host, DN-500R 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-500R receives an unknown command from the host or if a received command fails for some other reason, DN-500R will send a NACK signal (0x15) to the host.

- When sending consecutive commands from the host, do not send the second command until DN-500R 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-500R will send the "Busy" status information code (**@0BDERBUSY**) to the host.

- If DN-500R 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-500R 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-500R.

- Do not send a second status request command from the host until DN-500R has responded to the first.

- When sending a command to DN-500R 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-500R 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-500R is made from the device itself, the host will send an ACK (0x06) signal to DN-500R. If DN-500R does not receive the ACK signal within 300 ms, it will automatically send the status information to the host again. If DN-500R then fails to receive the ACK (0x06) signal again, the process will timeout.

Control Command Codes

Use the codes below to control your DN-500R.

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**.

Control Commands (Host → DN-500R)			
CATEGORY	**CONTENTS**	**CODE**	**DESCRIPTION**
Power/Media	Power On	@023PW\r	Powers on DN-500R
	Power Standby	@02312\r	Puts DN-500R in standby
	Set Power On Mode	@0PO*XX*\r	Changes the default mode that DN-500R 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) or **US** (USB drive)
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-500R 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
	Activate One Touch Rec	@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)
	Volume Up/Down	@023V*X*\r	Turns the volume of the recording up or down 1.0 dB, where *X* (the direction) = **+** (up) or **-** (down)

Control Commands (Host → DN-500R)			
CATEGORY	**CONTENTS**	**CODE**	**DESCRIPTION**
Recording	Left Channel 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 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-500R 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 WAV (PCM)	@0AFPM*NN*\r	Sets the file format for recordings to WAV and sets the file bit length, where *NN* (the bit length) = **16** or **24**
	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	@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 SD1 as the backup media), or **US** (turns dual recording on and selects USB as the backup media)
	Relay Record	@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), or **US** (turns relay recording on and selects USB as the secondary media)
	Turn Auto Track On/Off	@0AT*hhmm*\r	Sets DN-500R 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

Control Commands (Host → DN-500R)			
CATEGORY	**CONTENTS**	**CODE**	**DESCRIPTION**
Advanced Recording Options	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-500R 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-500R 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
	Rename User Area	@0Ua*xxxx*\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

Control Commands (Host → DN-500R)			
CATEGORY	**CONTENTS**	**CODE**	**DESCRIPTION**
Advanced Recording Options	Add/Remove User Area from Recorded File Name	@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-500R 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-500R 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**
	Delete All Timer Settings	@0ShAD\r	Delete all 30 record timer settings on DN-500R

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Control Commands (Host → DN-500R)			
CATEGORY	**CONTENTS**	**CODE**	**DESCRIPTION**
Advanced Recording Options	Lower/Raise Input Level	@0ItXYYY\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 YYY (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: @0ItL+15
	Set Recording Input Routing	@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	@0RIXX\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)
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**
	Set Playback Range	@0PrXX\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	@0PMXX\r	Sets how DN-500R 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	@0RENN\r	Activates or deactivates the repeat feature, where NN = **00** (turn repeat on) or **01** (turn repeat off)
	Turn Random On/Off	@0RNnn\r	Activates or deactivates random playback for the current tracklist, where nn = **00** (turn random on) or **01** (turn random off)

Control Commands (Host → DN-500R)			
CATEGORY	**CONTENTS**	**CODE**	**DESCRIPTION**
Track Playback	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-500R 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)
	Activate Autocue	@0AC*NN*\r	Sets the DN-500R 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-500R)			
CATEGORY	**CONTENTS**	**CODE**	**DESCRIPTION**
Advanced Playback Options	Set Timer (by day of the week)	@0TPDW*XX*xxx xxxx*hhmm*FFFF *F*\r	Sets DN-500R 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) 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 track playback only on Monday, Wednesday and Friday, enter **_M_W_F_** for *xxxxxxx* Note: 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 MDDhhmm*FFF *FF*\r	Sets DN-500R 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) Note: 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-500R 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-500R
Track Selection	Restart/Previous Track	@02333\r	Restarts the current track or skips to the previous track in the tracklist

Control Commands (Host → DN-500R)			
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-500R)			
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-500R 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** Note: 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** Note: 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-500R)			
CATEGORY	**CONTENTS**	**CODE**	**DESCRIPTION**
Hot Start Assignment	Save Hotlists	@0HSSR\r	Saves all DN-500R'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-500R)			
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-500R)			
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
Audio Output Settings	Lower/Raise Output Level	@0Ot*XYYY*\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 *YYY* (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)
Clock/Display Settings	Set Date and Time	@0Dt*YYMMDDhhmm*\r	Sets the date and time on DN-500R, where *YYMMDD* (the year, month, and day) = **130101–351231** and *hhmm* (the time in hours:minutes) = **0000–2359**
	Observe/Don't Observe Daylight Savings	@0dS*NN*\r	Determines whether DN-500R 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*MMDDhhmm*\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*MMDDhhmm*\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**

Control Commands (Host → DN-500R)			
CATEGORY	**CONTENTS**	**CODE**	**DESCRIPTION**
Clock/Display Settings	Set Time Format	@0TD*XXX*\r	Determines how the time will be shown on DN-500R'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)
	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) Note: Executing this command will cause DN-500R to reboot
Other Settings	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)

Control Commands (Host → DN-500R)			
CATEGORY	**CONTENTS**	**CODE**	**DESCRIPTION**
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)
	Set 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
	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-500R'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
	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**)

Control Commands (Host → DN-500R)			
CATEGORY	**CONTENTS**	**CODE**	**DESCRIPTION**
Other Settings	Turn Auto Reboot On/Off	@0Ar*NN*\r	Determines whether DN-500R 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
	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-500R. In response, DN-500R 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-500R)		Status Information (DN-500R → Host)		
REQUEST	**CODE**	**ANSWER**	**CODE**	**DESCRIPTION**
Power Status	@0?PW\r	On	@0PW00\r	The power is on
		Standby	@0PW01\r	DN-500R is in standby mode
Power On Mode	@0?PO\r	Resume playback	@0PORM\r	DN-500R is set to resume playback of the last played track when powered on
		Play first track	@0POPF\r	DN-500R is set to play the first track in the last used folder when powered on
		Stop	@0POST\r	DN-500R is set to stop playback when powered on
		Record	@0PORE\r	DN-500R 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) or **S1** (SD)
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
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) 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 the SD card, 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

Status Request Commands (Host → DN-500R)		Status Information (DN-500R → Host)		
REQUEST	**CODE**	**ANSWER**	**CODE**	**DESCRIPTION**
Device Status	@0?ST\r	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-500R is currently loading
		Busy	@0STBY\r	DN-500R 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 Source	@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
		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-500R is set to save new recordings to the currently selected folder
		Fixed	@0RfF*XXXXX*\r	DN-500R is set to save new recordings to a specific folder, where *XXXX* stands for the name of the folder

Status Request Commands (Host → DN-500R)		Status Information (DN-500R → Host)		
REQUEST	**CODE**	**ANSWER**	**CODE**	**DESCRIPTION**
Remaining Record Time	@0?RT\r	Amount of available recording time	@0RT*hhhmmss*\r	The estimated amount of time that DN-500R 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-500R 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-500R will answer with **0000** for the variable if the auto track feature is disactivated
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

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Status Request Commands (Host → DN-500R)		Status Information (DN-500R → Host)		
REQUEST	CODE	ANSWER	CODE	DESCRIPTION
Dual Recording Status	@0?dR\r	Off	@0dROF\r	Dual recording is turned off and no backup media is selected
		SD1	@0dRS1\r	Dual recording is turned on and SD 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 and no secondary media is selected
		SD1	@0rRS1\r	Relay recording is turned on and SD is set as the backup media
		USB	@0rRUS\r	Relay recording is turned on and USB is set as the backup media
Record Channel Setting	@0?CH\r	Stereo	@0CHST\r	DN-500R is set to record stereo files
		Mono (L)	@0CHML\r	DN-500R is set to record left-channel mono files
		Mono mixed	@0CHMX\r	DN-500R 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-500R)		Status Information (DN-500R → 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-500R is set to include the user area in the names of recorded files
		Off	@0US01\r	DN-500R 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**

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Status Request Commands (Host → DN-500R)		Status Information (DN-500R → Host)		
REQUEST	CODE	ANSWER	CODE	DESCRIPTION
Track File Format	@0?af\r	WAV	@0afWV*NN*	The current track is a WAV file, where *NN* (the bit length) = **16** or **24**
		MP3	@0afM3*NNN*\r	The current track is an MP3 file, where *NNN* stands for the bit rate in Kbps
		AIFF	@0afAL*NN*\r	The current track is an AIFF file, where *NN* (the bit length) = **16** or **24**
		AAC	@0afAC*NNN*\r	The current track is an AAC file, where *NNN* stands for the bit rate in Kbps
Track Size (by 3-digit number)	@0?Ts*nnn*\r	File size of the track	@0Ts*NNNNNN*\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?ts*nnnn*\r	File size of the track	@0ts*NNNNNN*\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	@0fs*NN*\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	@0Tf*nnnn*\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	@0HP*nn*\r	The hot start number for the current track, where *nn* (the hot start number) = **01–20**
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
Hot Start File Information	@0?Hs*nn*\r	Information on the current hot start track	@0Hs*nnxxx: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	@0tl*MMMSSFF*\r	The length of the current track, where *MMMSSFF* (the length in minutes, seconds, and frames) = **0000000–9995999**

Status Request Commands (Host → DN-500R)		Status Information (DN-500R → Host)		
REQUEST	CODE	ANSWER	CODE	DESCRIPTION
Elapsed Track Time	@0?ET\r	Time elapsed in the current track	@0ET*hhhmmss*\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	@0RM*hhhmmss*\r	The amount of time remaining before the current track ends, where *hhhmmss* (the amount of time in hours, minutes, and seconds) = **0000000–9995959**
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 Note: 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
File List Status	@0?UL\r	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-500R is set to include all tracks on the selected media source in the current tracklist
		Folder	@0pRFD\r	DN-500R is set to include only tracks from the selected folder in the current tracklist
Playback Mode	@0?PM\r	Single Play	@0PMSP\r	DN-500R is set to stop playback after the currently playing track ends
		Continuous	@0PMCN\r	DN-500R 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-500R is set to play the currently loaded program list

Status Request Commands (Host → DN-500R)		Status Information (DN-500R → Host)		
REQUEST	CODE	ANSWER	CODE	DESCRIPTION
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-500R is set to standby at the start of the current tracklist upon executing the stop command
		Next	@0FMNT\r	DN-500R is set to cue the next track in the tracklist upon executing the stop command
		Recue	@0FMRC\r	DN-500R 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-500R 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	@0?Sp\r	Unchanged	@0Sp00\r	DN-500R is set to route the recording input signal through the audio outputs
		Changed	@0Sp01\r	DN-500R 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-500R)		Status Information (DN-500R → Host)		
REQUEST	CODE	ANSWER	CODE	DESCRIPTION
Recording Timer Setting	@0?Sh*NN*\r	Recording scheduled by date and time	@0ShDT*YYMMD DHHMMhhmmU UUUU*\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 Note: 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 timer 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 Note: For the *xxxxxxx* variable, an entry of **_** indicates that the corresponding day will be skipped Note: For the *HH* variable, an entry of ****** indicates hourly scheduling
Playback Timer Setting	@0?TP*NN*\r	Playback scheduled by date and time	@0TPDT*YYMMD Dhhmm FFFF*\r	The scheduled timer 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 Note: 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**

Status Request Commands (Host → DN-500R)		Status Information (DN-500R → Host)		
REQUEST	CODE	ANSWER	CODE	DESCRIPTION
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-500R is paused, stopped, or in standby
Pitch/Speed	@0?PT\r	Pitch/speed setting	@0PT*SSXXXX*\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-500R will answer with this code: @0PTON0145; if the pitch/speed is currently set to –8.0%, DN-500R will answer with this code: @0PTON1080
Master Key	@0?KY\r	On	@0KY00\r	Master key is turned on
		Off	@0KY01\r	Master key is turned off
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)

Status Request Commands (Host → DN-500R)		Status Information (DN-500R → Host)		
REQUEST	CODE	ANSWER	CODE	DESCRIPTION
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)
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-500R is set to playback audio in mono
		Off	@0MO01\r	DN-500R 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*NNN*\r	The amount of dB that the left channel input is set to be lowered or raised, where *NNN* (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-500R will answer with this code: @0ltL+15

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Status Request Commands (Host → DN-500R)		Status Information (DN-500R → Host)		
REQUEST	**CODE**	**ANSWER**	**CODE**	**DESCRIPTION**
Right Channel Input Adjustment	@0?ItR\r	Amount of volume adjustment	@0ItR*NNN*\r	The amount of dB that the right channel input is set to be lowered or raised, where *NNN* (the volume adjustment in multiples of 0.1 dB) = **-20 – +20**
Left Channel Output Adjustment	@0?OtL\r	Amount of volume adjustment	@0OtL*NNN*\r	The amount of dB that the left channel output is set to be lowered or raised, where *NNN* (the volume adjustment in multiples of 0.1 dB) = **-20 – +20**
Right Channel Output Adjustment	@0?OtR\r	Amount of volume adjustment	@0OtR*NNN*\r	The amount of dB that the right channel output is set to be lowered or raised, where *NNN* (the volume adjustment in multiples of 0.1 dB) = **-20 – +20**
Reference Value (XLR/RCA)	@0?Fr\r	Reference Value	@0Fr*NN*\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)
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
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-500R is set to automatically reboot if the main processor freezes
Auto Reboot Setting	@0?Ar\r	Off	@0Ar01\r	DN-500R 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-500R, where *YYMMDD* (the year, month, and day of the month) = **130101––351231** and *hhmm* (the time in hours and minutes) = **0000–2359**
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

Status Request Commands (Host → DN-500R)		Status Information (DN-500R → Host)		
REQUEST	**CODE**	**ANSWER**	**CODE**	**DESCRIPTION**
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-500R is set to observe daylight savings time
		Off	@0dS01\r	DN-500R 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-500R will begin observing daylight savings time, where *MMDD* (the date) = **0101–1231** and *hhmm* (the time) = **0000–2359**
Daylight Savings End	@0?de\r	Daylight savings end date/time	@0de*MMDDhhmm*\r	The date and time that DN-500R 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
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

Status Request Commands (Host → DN-500R)		Status Information (DN-500R → Host)		
REQUEST	CODE	ANSWER	CODE	DESCRIPTION
Fader Start Pin Setting (Normal Mode Parallel Control)	@0?FD\r	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
		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
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-500R)		Status Information (DN-500R → 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-500R from the device itself, DN-500R may automatically send status information to the host. See below for the status information codes that can be automatically sent to the host.

Automatic Status Information (Host → DN-500R)			
CATEGORY	**CONTENTS**	**CODE**	**DESCRIPTION**
Media Selection	USB	@0MEUS\r	The USB drive was selected as the current media source
	SD	@0MES1\r	The SD card 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-500R is currently loading
	Busy	@0STBY\r	DN-500R is currently busy
	File List Opening	@0STFL\r	The file list was opened
	Main Menu Opening	@0STED\r	The main menu was opened
	Error	@0STER\r	There is an operation error

Automatic Status Information (Host → DN-500R)			
CATEGORY	**CONTENTS**	**CODE**	**DESCRIPTION**
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-500R. 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 "Set Admin Password" control command (@0PD*xxxx*), the acceptable characters for the *xxxx* variable are only those between 0x21 and 0x7E (with the additional exception of 0x3A).

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.

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