MCP-D700 Made Simple

A plain-English guide to programming the Kenwood TM-D700 from a PC

Covers every setting in Kenwood's MCP-D700 Memory Control Program, plus details from the TM-D700 owner's manual, Sky Command II setup, and tips gathered from the ham radio community.

Created by N8GMZ
www.WE8CHZ.org

Copyright © 2026 N8GMZ / WE8CHZ.org. Free to copy and share for non-commercial use with credit kept intact. Selling this guide or including it in anything sold is not permitted. Full terms on the last page.

An independent guide written in original language. Not affiliated with or endorsed by JVCKENWOOD. Kenwood, SKY COMMAND and MCP-D700 are names of JVCKENWOOD; APRS is a registered trademark of the late Bob Bruninga, WB4APR. Facts are drawn from the sources listed at the end, marked like this: [1]. Edition 3, November 2026.

Contents

1. What MCP-D700 does **4**

2. What you need before you start **5**

The cable . . . 5

The computer . . . 5

The COM port number (the #1 cause of trouble) . . . 5

Matching the speed . . . 6

3. Your first session, step by step **7**

Read and Write options . . . 7

4. Getting around the program **8**

Main window . . . 8

Working with your list . . . 8

5. Editing a channel **9**

Programmable VFO . . . 9

DTMF memories . . . 9

Moving between channels in the Edit window . . . 10

6. Radio settings explained **11**

Radio menu 1 . . . 12

Key function modes in detail . . . 13

Speaker modes in detail . . . 14

Radio menu 2 . . . 15

7. On the radio itself: locks, memories, resets, repeater **16**

The two locks compared . . . 16

Programmable Memory (PM) . . . 16

Storing a setup in a PM slot . . . 16

Recalling a PM slot . . . 16

What a PM slot remembers . . . 17

Ways to use PM slots . . . 17

Resets . . . 17

Cross-band repeater (U.S./Canada radios) . . . 18

8. APRS settings explained **19**

APRS menu 1 . . . 19

APRS menu 2 . . . 20

9. SSTV and Sky Command **21**

SSTV (needs the optional VC-H1 camera/display unit) . . . 21

Sky Command II (U.S. and Canada radios) . . . 21

What MCP-D700 sets (radio menus 4-1 to 4-3) . . . 21

Getting on the air with a TS-2000 as Transporter . . . 21

10. Troubleshooting **23**

Alternatives . . . 23

11. Quick glossary **24**

Sources **25**

Sharing and use **26**

You are welcome to . . . 26

You may not . . . 26

Fine print . . . 26

1. What MCP-D700 does

MCP-D700 is Kenwood's free program for the TM-D700 mobile radio. Instead of thumbing through the radio's menus one button at a time, you plug the radio into a computer, pull everything off it, change what you want on a big screen, and send it back.[1]

It can handle almost everything the radio stores:[1]

- All 200 memory channels, plus the program-scan limit channels (L0-U9)
- The VFO (free-tuning) settings for each band and the CALL channel
- DTMF (touch-tone) memories
- Nearly every item in the radio's own menus: display, sound, scanning, repeater, microphone keys
- APRS settings (position reporting and messaging)
- SSTV picture-overlay settings for the optional VC-H1 camera unit
- SKY COMMAND remote-control settings (U.S. and Canada radios only)

Your work saves to a file ending in **.700**, so you can keep backups, build different setups for different events, and share them with other D700 owners. The program can also open older **.d7** files.[1]

Tip: The single best habit with this program: **read the radio and save that file before you change anything.** If something goes wrong later, you can put the radio back exactly how it was.

2. What you need before you start

The cable

The D700 is programmed through the **9-pin COM port on the front of the main unit** (the body), the left-most jack in the row with GPS, DATA, PANEL and MIC.[16] The 6-pin round DATA jack beside it is for an external modem, sound card or the VC-H1, and cannot program the radio.[16]

- Kenwood calls for a **straight-through** serial cable (pin 2 to pin 2, pin 3 to pin 3), not a "null modem" crossover cable.[1,2,13]
- Depending on your cable's ends, you may need a small DB-9 **gender changer** to make it fit. That is normal and does not mean the cable is wrong.[5]
- If your computer has no serial port, use a **USB-to-serial adapter**. Owners report far fewer headaches with adapters built on a genuine **FTDI** chip than with cheap clones.[5,6]

Heads up: Kenwood's instructions say to **turn the radio OFF before plugging in the cable.**[1,2] The radio manual adds: never plug or unplug anything on the front of the main unit with the power on.[16] Make the connection first, then power the radio on with the PWR switch on the control head.

The computer

MCP-D700 was written in 1999 for Windows 95, 98, Me and 2000.[1] It is tiny and generally still runs on modern Windows, but two old-age issues can bite:

- **The installer.** Many programs from that era used a 16-bit setup program. 64-bit Windows (which includes every copy of Windows 11) cannot run 16-bit programs at all.[8] If Setup.exe refuses to start, the usual workarounds are installing on an older 32-bit Windows PC or a virtual machine and copying the installed folder over.
- **The help file.** The original help is in the old WinHelp (.hlp) format. Microsoft dropped WinHelp from Windows 10 and later, so double-clicking it does nothing useful.[9] That is the reason this guide exists.

The current download (version 1.10) is still on JVCKENWOOD's website. During installation you must pick your radio's version (U.S./Canada "A" model or European "E" model). Pick the wrong one and the program will misbehave; the fix is to uninstall and run setup again.[1,2]

The COM port number (the #1 cause of trouble)

Inside MCP-D700, the port list only offers **COM1 through COM4.**[1] Windows often gives a USB adapter a higher number, such as COM7, and then the program simply cannot find the radio. This catches a lot of people, and not just with Kenwood software.[5,6]

To fix it, give the adapter a low number in Windows:[7]

1. Plug in the USB-serial adapter.
2. Open **Device Manager** (right-click the Start button).
3. Expand **Ports (COM & LPT)**, right-click your adapter, and choose **Properties**.
4. On the **Port Settings** tab click **Advanced**, choose COM1-COM4 from the list, and click OK. It is fine to pick a number Windows labels "in use" if nothing is actually using it.
5. Unplug and replug the adapter. Keep using the same USB socket afterward so the number sticks.

Matching the speed

The program and the radio must talk at the same speed. MCP-D700 offers 9600, 19200, 38400 or 57600 bits per second; whatever the radio is set to, the program must match, or nothing gets through. If you change the speed on the radio, turn it off and back on for the change to take.[1] When in doubt, try **9600** first; it is the speed other programs, like CHIRP, most reliably connect at.[10,13]

3. Your first session, step by step

1. Radio OFF. Connect the cable to the COM port on the front of the main unit and to the PC.
2. Turn the radio ON.
3. Start MCP-D700. In the **Radio** menu, use **Port Select** to pick your COM port and **Port Speed** to match the radio.[1]
4. Click **Read** (or Radio > Read > All). A progress bar shows while data comes over.[1]
5. Immediately use **File > Save As** and save a backup, for example "D700 original 2026-11-01.700".
6. Make your changes (see the next chapters).
7. Save the file again under a new name.
8. Click **Write** (or Radio > Write > All). Confirm the prompt. Wait for the progress bar to finish before touching the radio.[1]

Read and Write options

Choice	What it moves
All (or the Read / Write button)	Everything: channels and all menu settings.
Memory	Memory channels, the CALL channel, VFO settings and DTMF memories only.
Menu	The Radio, APRS, SSTV and Sky Command menu settings only. Your channels are left alone.

Writing only **Menu** is handy when you want to change a setting without risking your channel list, and vice versa.[1]

Heads up: The program refuses to write anything the radio considers illegal, such as a frequency outside its range.[1] Kenwood's own software is also known to block entering frequencies from 400 to 410 MHz even though the radio can receive there.[11] You can cancel a read or write partway with the Cancel button, but avoid doing that during a write unless you must.

4. Getting around the program

Main window

- Click a category (memory channels, VFO, a menu group, and so on) to open it. You can also move between categories with **Tab**, **Shift+Tab** and the **arrow keys**.[1]
- Double-click a channel (or select it and press **Enter**) to open its **Edit window**.[1]
- Help > About shows which version you have.[1]

Working with your list

Task	How	Notes
Cut	Edit > Cut, the Cut button, or Ctrl+X	Not allowed on VFO or CALL entries.
Copy	Edit > Copy, the Copy button, or Ctrl+C	
Paste	Edit > Paste, the Paste button, or Ctrl+V	May be refused if the target spot cannot hold that kind of data.
Delete	Edit > Delete or Ctrl+Delete	Not allowed on VFO or CALL entries.
Sort	Edit > Memory channel Sort	Sorts by frequency or by name. Program-scan channels (L0-U9) are not sorted.
Start fresh	File > New	Resets everything on screen to factory defaults (asks to save first).
Open	File > Open	Opens .700 files and older .d7 files.
Save / Save As	File menu or Save button	Saves as .700 only.
Print	File > Print	Prints your channel list and settings.

Tip: You can run **two copies of MCP-D700 at the same time**, for example one showing what is in the radio and one showing a saved file, and copy and paste between them.[1]

5. Editing a channel

The Edit window is where each channel is built. Fields only appear when they apply; for example, the name box only shows on memory channels.[1]

Field	What it means	How to set it
Frequency	Where the radio listens (and normally talks).	Type it with a decimal after the MHz part, e.g. 146.520. If it does not fit the current step or is out of range, the program nudges it to the nearest valid value when you press Enter or OK.[1]
Step	The size of each "click" when tuning.	Pick from the list. Changing the step does not move a frequency you already entered.[1]
Shift	Whether you transmit on the same frequency or offset for a repeater.	Simplex (same), Plus, or Minus. European radios also offer -7.6 MHz. Memory and CALL channels can instead be set to Split.[1]
Offset	How far the transmit frequency moves for a repeater (e.g. 0.600 or 5.000).	Only editable in the VFO screens; 0 to 29.95 MHz in 50 kHz steps.[1]
Split channel	A fully separate transmit frequency, for odd repeaters or crossband work.	Memory and CALL channels only. Choose "Split Channel" and type the transmit frequency.[1]
Reverse	Swaps transmit and receive, so you can hear the repeater input directly.	On or off. Not available on split channels.[1]
Tone / CTCSS / DCS	Sub-audible codes. Tone = send one to open a repeater. CTCSS = send and only unmute for matching signals. DCS = digital version of the same idea.	Pick one (or all off), then choose the tone frequency or DCS code from the list.[1]
Name	Label shown on the display instead of the number.	Memory channels only. Up to 8 characters on the D700; the program warns you about characters the radio cannot show.[1]
Lockout	Skips the channel during memory scan.	On or off. Not used on program-scan channels L0-U9.[1]
TX power	High, medium or low output.	Set per band in the VFO screens for 144 and 440 MHz.[1]
AM	Listen in AM instead of FM (aircraft band).	Only appears when the frequency is one where AM is allowed.[1]
Narrow	Narrower FM on VHF.	European models only.[1]

Programmable VFO

This fences off a range so the tuning knob cannot wander outside it, which is handy for keeping a mobile radio on, say, 144-146 MHz. Open the VFO screen for that band and enter the lower and upper limits in MHz. Values outside the receive range are refused, and entering them upside-down (upper below lower) will give odd results.[1]

DTMF memories

These store touch-tone strings, such as autopatch or link codes, so you can send them with a button press. Each holds up to 16 characters from 0-9, A-D, * and #. A **space** inserts a pause (length set by the DTMF Pause setting). Each memory can have a name of up to 8 characters.[1]

Moving between channels in the Edit window

Key	Action
Page Up / Page Down	Next / previous channel or band
Home / End	First / last channel or band
Tab / Shift+Tab	Next / previous field
Up / Down arrows	Change a drop-down choice
Space	Tick or untick a checkbox
Enter	Lock in a typed frequency or offset
Esc	Close the window

You can also type a channel number (1-200 or L0-U9) directly into the box at the top. Press **OK** to keep your edits or **Close** to leave; if you try to move away with unsaved edits, the program asks what to do.[1]

6. Radio settings explained

These are the same settings found in the radio's own menu system, grouped the way MCP-D700 shows them. The "Where" column is the location in the program. Plain-language explanations of what each setting actually does come from the radio's manual and owner write-ups where noted.

Radio menu 1

Setting	Where (radio menu #)	Choices	What it does
Band select	Band Select	A and/or B	Which side(s) of the radio are on. At least one must be on.[1]
Transmit band / Control band	Band Select	A or B	Transmit band: the side the mic transmits on. Control band: the side the knobs and keys adjust.[1]
Mute	Function	On/Off	Silences the other band while you are using the transmit band, so they don't talk over each other.[14]
A.B.C. (Auto Band Change)	Function	On/Off	When a call comes in on the receive-only side, the radio temporarily makes that side the transmit band so you can just key up and answer. It switches back about 2 seconds after the signal ends. Pressing BAND SEL or the mic PTT cancels it; it does not work in single-band mode, and Visual Scan turns it off while scanning.[16]
Lock	Function	On/Off	"Transceiver Lock." Meant for mobiles where you run things from the microphone: it locks out nearly all front-panel buttons and the tuning knob. Power, volume, squelch and the microphone keys still work. On the radio: press F, then MHz; "LOCK" shows on the display.[16]
All Lock	Function > Lock	On/Off	"All-Control Lock." For when you only want to listen to one frequency and not transmit. It locks out everything except the power switch and turning All Lock itself off. On the radio: turn on Transceiver Lock, power off, then hold MHz while powering on; "ALL LOCK" shows. You cannot reset the radio while it is on.[16]
Key beep	Audio (1-2-2)	On/Off	Turns off the button-press beep. APRS and DX-cluster alerts and the TOT/APO warnings still sound.[16]
Beep volume	Audio (1-2-1)	Off, 1-7	How loud beeps are. Factory setting is 5.[16]
Voice / Voice volume	Audio	Off, English, Japanese; Off, 1-7	Spoken frequency announcements. Only works with the optional VS-3 voice board installed; the items only show after reading a radio that has one.[1]
Speaker	Audio (1-2-3)	Mode 1 (factory), Mode 2	The main unit has two external speaker jacks (SP1 and SP2) on the back. This chooses which band plays through which speaker. See the speaker table below.[16]
Key function	Audio per help file; Display on radio (1-1-5)	Mode 1 (factory), 2, 3	Picks which set of jobs the five buttons under the display do with a plain press, with F first, and with F held for 1 second. The three sets are the same in every mode; the mode only changes which set you get with a plain press. See the key function table below.[16] APRS inventor Bob Bruninga recommended **Mode 3** for anyone using APRS.[3,15]
Power on message	Display (1-1-1)	Up to 8 characters	Greeting shown for about 2 seconds at switch-on. Factory text is "HELLO !!". Your call sign is a popular choice.[16]
Dimmer / Auto dimmer	Display	Off, 1-4; On/Off	Display brightness, and whether it dims by itself.[1]
Contrast	Display (1-1-2)	16 steps	Display contrast.[1,4]

Setting	Where (radio menu #)	Choices	What it does
Negative	Display	On/Off	Reverses the display (light text on dark, or the other way).[1]
VHF AIP	TX/RX (1-3-5)	On/Off	Advanced Intercept Point. Cuts interference and distortion caused by strong nearby signals mixing (intermod) in crowded VHF areas. VHF only; it has no effect on UHF.[16]
AM / FM	Edit window (1-3-4 on radio)	AM/FM	Band A can receive AM (the aircraft band defaults to AM). Receive only; band B cannot use AM.[16]
S-meter squelch (A/B)	TX/RX (1-3-2)	On/Off per band	The squelch only opens for signals at least as strong as the S-meter level you set with the SQL knob, so weak stations you don't care about stay quiet.[14,16]
Squelch hang time	TX/RX (1-3-3)	Off, 125, 250, 500 ms	With S-meter squelch on, how long the audio stays open after a signal drops, so fading stations don't sound choppy. Factory setting is Off.[16]
DTMF Tx speed	Radio menu 1 (1-5-2)	Fast/Slow	How quickly stored touch-tones are sent.[1,4]
DTMF pause	Radio menu 1 (1-5-3)	100-2000 ms	Length of the pause a space inserts in a DTMF memory.[1,4]

Heads up: The help file lists Key function under the Audio group, while on the radio it lives under the Display menu (1-1-5).[1,4,16] Same setting either way.

Key function modes in detail

Under the display are six buttons. The left one is always **F**; the other five change job. Each mode decides which row of jobs you get with a plain press, which row needs **F** first, and which row needs **F held for 1 second**. Pressing F (OFF) again returns the labels to normal.[16]

How you press it	Mode 1 (factory)	Mode 2	Mode 3 (APRS)
Plain press	TONE, REV, LOW, MUTE, CTRL	T.SEL, SHIFT, STEP, VISUAL, DIM	LIST, P.MON, BCON, MSG, POS
F, then the key	T.SEL, SHIFT, STEP, VISUAL, DIM	LIST, P.MON, BCON, MSG, POS	TONE, REV, LOW, MUTE, CTRL
F held 1 s, then the key	LIST, P.MON, BCON, MSG, POS	TONE, REV, LOW, MUTE, CTRL	T.SEL, SHIFT, STEP, VISUAL, DIM

Source: TM-D700 instruction manual, page 67.[16] So the choice is simply which row you use most:

- **Mode 1:** everyday voice operating. One touch for tone, reverse, power level, mute and control band.
- **Mode 2:** setup-minded. One touch for tone frequency, offset direction, step size, Visual Scan and dimmer.
- **Mode 3:** APRS. One touch for the station list, packet monitor, beacon, messages and position.

Label	What it does
TONE	Steps through Tone, CTCSS and DCS on/off.[16]
REV	Reverse: swaps transmit and receive frequencies.[16]
LOW	Steps transmit power: high, medium, low.[16]
MUTE	Mutes the band that is not the transmit band.[16]
CTRL	Chooses which band the panel controls.[16]
T.SEL	Opens tone / CTCSS / DCS code selection.[16]
SHIFT	Steps the repeater offset direction: simplex, plus, minus.[16]
STEP	Changes the tuning step size.[16]
VISUAL	Starts Visual Scan, the bar-graph band scope.[16]
DIM	Changes display brightness.[16]
LIST, P.MON, BCON, MSG, POS	APRS keys: list of heard stations, packet monitor, beacon on/off, messages, and position display.[3]

Speaker modes in detail

External speakers plug into SP1 and SP2 on the back of the main unit (8 ohm, 3.5 mm mono plug).[16] Which band comes out where:[16]

What is plugged in	Mode	Band A plays on	Band B plays on
Speaker in SP1 only	Mode 1	External	External
	Mode 2	External	External
Speaker in SP2 only	Mode 1	External	Internal
	Mode 2	Internal	External
Speakers in both SP1 and SP2	Mode 1	External 2 (SP2)	External 1 (SP1)
	Mode 2	External 1 (SP1)	External 2 (SP2)

With nothing plugged in, both bands play on the built-in speaker. With one speaker in SP1, the mode makes no difference. In practice: use SP2 plus Mode 1 or 2 to split the bands between the radio and one external speaker, or use both jacks to give each band its own speaker.[16]

Radio menu 2

Setting	Where (radio menu #)	Choices	What it does
Data band	TNC (1-6-1)	A, B, or A/B split	Which band an external packet modem uses.[1,4]
DCD sense	TNC (1-6-2)	Data band, or A and B	Decides when the built-in modem considers the channel busy and holds off sending: when only the data band is busy, or when either band is busy.[1,4]
Time zone	TNC	-12:00 to +12:00 from UTC	Offset used for the clock and APRS time stamps.[1]
Mic keys PF1-PF4	MIC	Many functions	Assigns a job to each programmable microphone key (factory: PF, MR, VFO, CALL).[1,4]
MIC control	MIC	On/Off	Lets the microphone keypad remote-control the radio.[1]
DTMF monitor	MIC	On/Off	Lets you hear the tones you send.[1]
Auto offset	Repeater	On/Off	Automatically picks the standard repeater shift for the frequency you tune to.[1]
Repeater hold	Repeater (1-7-5)	On/Off	For the built-in cross-band repeater (U.S./Canada radios): keeps the transmitter on for half a second after the incoming signal drops, which smooths out choppy relays.[16]
1750 Hz key / hold	Repeater (1-7-3)	On/Off	Makes the CALL key send a 1750 Hz burst (used to open many European repeaters), and whether the transmitter stays keyed afterward.[1,4]
Auto PM store	AUX (1-4-1)	On/Off (factory ON)	When ON, the active Programmable Memory gets overwritten with your current settings whenever you switch to another PM, press OFF, or power down.[16] Most owners turn it **OFF** so saved setups stay put.[3]
APO	AUX (1-9-3)	On/Off	Auto Power Off: shuts the radio off after 3 hours with no button presses or knob turns. One minute before, "APO" blinks and warning tones sound.[16]
TOT	AUX (1-9-4)	3, 5, 10 min (factory 10)	Time-out timer: ends a transmission that runs too long (stuck mic protection). The radio beeps and drops to receive; release and press PTT again to keep talking.[16]
Visual scan	AUX (1-9-2)	31, 61, 91, 181 ch (factory 61)	How many channels the bar-graph band scope shows around your frequency.[16]
Scan resume	AUX (1-9-1)	Time (factory), Carrier, Seek	What scanning does after it stops on a signal. **Time:** stays about 5 seconds, then moves on even if the signal is still there. **Carrier:** waits until the signal ends, then resumes 2 seconds later. **Seek:** stops and stays.[16]
Data speed	AUX	1200 / 9600 bps	Packet speed for the DATA jack.[1]
Answer back / Code	Remote control	On/Off; 3 digits	Settings for controlling the radio by touch-tones over the air (U.S./Canada radios).[1]

7. On the radio itself: locks, memories, resets, repeater

These features are used from the front panel rather than set in MCP-D700, but they come up constantly when you program the radio.

The two locks compared

	Transceiver Lock ("LOCK")	All-Control Lock ("ALL LOCK")
Best for	Mobile installs run from the microphone	Parking on one frequency to listen only
What still works	Power switch, volume and squelch knobs, the microphone keys, and F / F+MHz (to unlock)	Only the power switch, and turning All Lock off
Turn on/off	Press F, then MHz	With Transceiver Lock on: power off, then hold MHz and power on
Side effects		Radio cannot be reset while it is on

Source: TM-D700 instruction manual.[16]

Programmable Memory (PM)

There are five PM slots. Each one is a snapshot of almost the whole radio setup, not just a frequency: think of them as five complete "personalities" for the radio, one press away.[16]

Where the buttons are: PM is on the right side of the display, above MNU. Press **F** first and that same button becomes **P.IN** ("PM in", meaning store). The numbers **1-5** appear on the buttons under the display, and the left button becomes **OFF** (or ESC while storing).[16]

Storing a setup in a PM slot

1. Make sure the radio is receiving: not transmitting, not scanning, and Microphone Control is off.[16]
2. Set the radio up exactly how you want it: frequencies, tones, power, display, beeps, APRS and so on.
3. Press **F**, then **P.IN**. The numbers 1-5 blink along the bottom (ESC cancels).[16]
4. Press the button under the number you want (1-5). Done.[16]

Recalling a PM slot

1. Press **PM**. The numbers 1-5 appear along the bottom.[16]
2. Press 1-5. The whole setup loads, and the PM number shows in the upper-right corner. A small arrow in front of "PM" means Auto PM Store is on.[16]
3. To leave PM mode, press **PM**, then **OFF**.[16] You cannot recall a PM while transmitting.[16]

What a PM slot remembers

Saved separately for band A and band B	Saved once for the whole radio
VFO frequency and mode, memory or CALL channel mode	Which band is TX and which is control
Offset direction and amount, reverse, ASC	Transmit power, Auto Band Change, display dimmer
Tone, CTCSS, DCS on/off and their codes	Most RADIO menu settings
Programmable VFO limits, step size, FM/AM	Most APRS, SSTV and Sky Command settings

Not saved in a PM: Auto PM Store itself, memory channel lockouts and names, DTMF memories, the clock and date, the repeater function, COM port, remote control, SSTV mode, your stored APRS positions and status texts, and Sky Command mode.[16] Your 200 memory channels are never changed by recalling a PM.[16]

Ways to use PM slots

- **Shared radio:** give each family or club member their own slot with their favorite setup.[16]
- **Day and night:** two slots with the same frequencies, but a dim, silent setup for daytime and a bright display with beeps for night.[16]
- **Panic button:** keep slot 1 as an untouched copy of factory settings, so when the radio is in some mode you cannot figure out, PM then 1 gets you home without losing channels.[16] This only works if Auto PM Store is OFF.
- **Emcomm and events:** one slot for daily driving, one for APRS, one for your ARES/RACES net setup, one for a public-service event.[3]

Heads up: Auto PM Store is ON from the factory. With it on, after you recall a slot, the radio quietly overwrites that slot with whatever you change the next time you switch slots, press OFF or power down.[16] If you want your slots to stay exactly as stored, set Menu 1-4-1 to OFF.[3,16]

Reset just the PMs: hold PM while turning the radio on, then press OK (ESC cancels). Menu 1-9-7 does the same.[16]

Resets

Type	What it clears	How
Partial (VFO) reset	VFO settings only. Memory channels, lockouts, program-scan and DTMF memories are kept.	Hold VFO while turning power on, or Menu 1-9-7
PM reset	The five PM slots	Hold PM while turning power on, or Menu 1-9-7
Full reset	Everything you have customized	Hold MR while turning power on, or Menu 1-9-7

Resets are blocked while All-Control Lock or Channel Display mode is on.[16] Do a full reset after a transmit-range hardware modification so the radio picks up the change.

Heads up: Read the radio into MCP-D700 and save a file **before** any reset. Afterward you can write it straight back.

Cross-band repeater (U.S./Canada radios)

The D700A can relay signals between its two bands, for example letting a handheld on UHF reach a distant VHF repeater through the car radio.[16]

- **Locked-band mode:** one band always listens, the other always transmits. Set different TX and control bands before choosing the mode in Menu 1-7-6.[16]
- **Cross-band mode:** relays in both directions. Set the same band as TX and control first.[16]
- "PTT" blinks on the display while repeating, and Repeater hold (above) adds a half-second tail.[16]
- Courtesy: ask the repeater owner before relaying into their machine; many frown on unattended cross-band links.

8. APRS settings explained

APRS (Automatic Packet Reporting System) lets the D700 send your position and short text messages, and plot other stations on its screen. The D700 has the modem built in, so all it needs is a GPS for moving use, or a fixed position for home use.

APRS menu 1

Setting	Choices / limits	What it means
APRS	On/Off	Turns APRS mode on.[1]
My call sign	Call + optional -SSID (1-15)	Your station ID on the map. SSIDs like -9 are commonly used for mobiles.[1]
Position comment	15 choices	Short status attached to your position: Off Duty, Enroute, In Service, Returning, Committed, Special, Priority, several Custom slots, and Emergency.[1,4]
Unprotocol	Up to 6 chars + SSID	The "to" address APRS packets are sent to. Leave the default unless you know why to change it.[1]
Waypoint	Off, NMEA (6-9 digit), Magellan	Sends received stations out to a connected GPS as waypoints.[1]
Tx interval	0.2 to 30 min	How often the radio beacons your position automatically.[1]
Status Tx rate	Off, 1/1 to 1/8	How often your status text rides along: every beacon, every other one, and so on.[1]
Icon	15 presets or custom	The symbol shown for you on maps (car, house, etc.).[1]
Packet Tx	Manual, PTT, Auto	When to beacon: only when you press BCON, each time you key the mic, or on the timer.[1]
Packet speed / Data band	1200/9600; A, B or split	APRS normally uses 1200 bps. In North America the APRS frequency is 144.390 MHz.[1,3]
Beep	Off, Mine, All new, All	Which incoming APRS packets make a sound.[1]
GPS unit	NMEA or Not used	Whether a GPS receiver is connected.[1]
Position limit	Off, or 10-9990	Ignores stations farther away than this distance.[1]
Units	Miles/km; deg F/C	Display units for distance and temperature.[1]
Position ambiguity	Off, 1-4	Blurs your reported location on purpose, for privacy.[1]
UIDIGI	Up to 4 calls/aliases	Lets your radio relay other stations' packets under generic names. Leave it **blank** in a mobile so you don't clutter the network.[1,3]
Digipeater	On/Off	Allows relaying when a packet asks for your call sign specifically. ON is fine and helpful.[1,3]
Packet path	Up to 79 chars	Tells relay stations how far to pass your packet. **WIDE1-1,WIDE2-1** is the standard path for a mobile almost everywhere.[1,3,12] Separate entries with commas; to put a new one in front, retype the whole line.[1]

APRS menu 2

Setting	Limits	What it means
Status text	5 messages, 28 chars each	Free text sent with your beacon (e.g. "Monitoring 146.52"). Right-click the list to choose which one is active; an asterisk marks it.[1]
My position	5 positions	Stored latitude/longitude for when no GPS is connected. Pick the active one the same way.[1]
Auto message reply / Reply message	On/Off; 64 chars	Automatically answers incoming messages with your text, like an away message.[1]
Bulletin group	Up to 6 groups, 4 chars each	Filters which bulletins you see. Separate with commas.[1]
Message group	Up to 6 groups, 9 chars each	Lets you receive messages addressed to a group name as well as your call. Separate with commas.[1]

Tip: Proven APRS mobile setup from APRS inventor Bob Bruninga, WB4APR: Key function **Mode 3**; Auto PM store **OFF**; band A on 144.390 MHz, 1200 bps; path WIDE1-1,WIDE2-1; UIDIGI blank; Digipeater ON. He also suggested setting the APRS-band squelch just high enough that the BUSY light goes out between packets, because the radio won't transmit APRS if the squelch is open on noise.[3]

Tip: The radio has five **PM (Programmable Memory)** slots that each store a whole radio setup.[14] Build one for everyday APRS, one for an event or net, and so on, and switch between them with a single press.[3]

9. SSTV and Sky Command

SSTV (needs the optional VC-H1 camera/display unit)

These settings control the text the D700 stamps onto slow-scan TV pictures.[1]

Setting	Limits
My call sign	Up to 8 characters
Message	Up to 9 characters
RSV (signal report)	Up to 10 characters
Colors (for each of the above)	Black, blue, red, magenta, green, cyan, yellow or white

Only letters, numbers, spaces and the characters ! ? / are allowed.[1]

Sky Command II (U.S. and Canada radios)

Sky Command II lets you run a Kenwood HF radio from somewhere else, using two VHF/UHF radios as the link. The radio in your hand or car is the **Commander**. The radio at the HF station is the **Transporter**; it is wired to the HF rig and passes audio and control commands back and forth over the air.[18,19] With a TS-2000, the TS-2000's own VHF/UHF sub-receiver acts as the Transporter, so no second radio is needed there.[17]

Supported HF radios include the TS-2000/2000X/B2000, TS-480HX/SAT, TS-570D/S, TS-590S and TS-870S. The D700A can act as either the Commander or the Transporter.[18]

What MCP-D700 sets (radio menus 4-1 to 4-3)

Setting	Rules
Commander call sign	Your call, e.g. N0CALL. Must be identical on both ends.[1,17]
Transporter call sign	A different station ID, usually your call with an SSID, e.g. N0CALL-1. Must also match on both ends.[1,17,19]
Tone frequency	The CTCSS tone the link uses. Must match on both ends; the TS-2000 default is 88.5 Hz.[1,17]

Call sign rules: letters A-Z, digits and at most one dash; up to 6 characters before the dash, 9 total, SSID 1-15, and it cannot start with a dash.[17]

Getting on the air with a TS-2000 as Transporter

1. On the TS-2000: enter the Commander call (Menu 62A), the Transporter call (62B), the tone (62C), and set speed to **1200 bps** (62D) for a D700.[17]
2. Put the TS-2000 main receiver on a clear 2 m FM frequency and the sub-receiver on a clear 70 cm FM frequency, then select T-PORTER (Menu 62E).[17]
3. On the D700: set the **same** VHF and UHF frequencies, then choose COMMANDER in Menu 4-4.[17]
4. When "PRESS [0] KEY TO START COMMANDER!!" appears, press 0 on the DTMF microphone.[17]

In Sky Command mode the microphone keys become a remote control: 0 shows the HF rig's status, UP/DWN tune, # then digits enters a frequency, B toggles VFO/memory, 7 toggles split, and PTT transmits on HF. Each key press briefly transmits a command.[17]

Tip: The Transporter identifies in Morse on 2 m every 10 minutes, and the TS-2000's auto power-off is disabled while it is acting as Transporter.[17] Only Menu 4-4 is available on the D700 while it is commanding.[17]

Heads up: Remote HF operation still needs a licensed control operator responsible for the station. Check current rules and band plans before running an unattended Transporter.

10. Troubleshooting

Problem	Likely cause and fix
"Port in use" or no response at all	Another program (CHIRP, a logging or APRS program) has the COM port open. Close it. Check that the COM number in the program matches Device Manager and is COM1-COM4.[1,6]
Adapter shows as COM5 or higher	Renumber it in Device Manager (Chapter 2).[6,7]
Progress bar never moves	Speed mismatch (try 9600 on both ends and power-cycle the radio), a null-modem cable, or a clone USB adapter. Swap in an FTDI-based adapter if you can.[1,5,10]
"Data cannot be read from radios other than TM-D700"	The program only talks to a D700. Also re-check the A/E model choice made during install.[1]
Write refused	Something in the file is out of range for the radio, such as a frequency outside its band.[1] Look for the channel it complains about.
Setup.exe won't run on Windows 10/11	64-bit Windows cannot run 16-bit installers.[8] Install on an older 32-bit PC or virtual machine and copy the program folder across.
Help won't open	Windows 10 and 11 no longer include the WinHelp viewer.[9] Use this guide.
Radio acting strangely after a bad write	Write your saved backup file. As a last resort, a full reset (Menu > Radio > AUX > Reset > Full Reset) returns the radio to factory settings, wiping everything, so write your backup afterward.[15,16]

Alternatives

- **CHIRP** (free) can program D700 memory channels but not the full menu set that MCP-D700 covers; some D700s only talk to it at 9600 bps.[5,10]
- **RT Systems** sells D700 software with its own USB cable, which owners report as trouble-free.[5]

11. Quick glossary

Term	Plain meaning
VFO	Free-tuning mode: turn the knob to any frequency.
Memory channel	A saved frequency with all its settings, recalled by number or name.
CALL channel	A one-touch favorite frequency per band.
Offset / Shift	The gap between a repeater's listen and talk frequencies, and its direction (+/-).
Split	A channel with a completely separate transmit frequency.
CTCSS / DCS / Tone	Sub-audible codes that open repeaters or keep unwanted traffic quiet.
DTMF	Touch-tone digits, used for remote control and autopatches.
Squelch	The gate that silences static until a signal arrives.
S-meter	The signal-strength meter.
TNC	The built-in data modem that makes packet and APRS work.
Digipeater	A station that rebroadcasts APRS packets to extend their reach.
SSID	The -number after a call sign that tells your different stations apart (e.g. -9).
PM	Programmable Memory: a snapshot of the whole radio setup, five slots.
Program scan (L0-U9)	Pairs of channels that set the lower and upper edges of a scan range.
COM port	A computer's serial connection, numbered COM1, COM2 and so on.

Sources

Numbers in the text, like [3], point to these. Explanations without a number are general amateur radio background written for this guide.

[1] Kenwood Corporation, *MCP-D700 Help* (WinHelp file, 1999), shipped with MCP-D700. Primary source for every program function; reworded here.

[2] JVCKENWOOD, "TM-D700A / TM-D700E Memory Control Program MCP-D700 Version 1.10". https://www2.jvckenwood.com/i/products/info/amateur/tmd700a_700e_soft.html

[3] Bob Bruninga, WB4APR, "Great APRS Setups for the TM-D700 Mobile" (2014). https://www.aprs.org/D7xx/d700-faq.txt

[4] K7JAR, "TM-D700A/E Serial Port Commands" (menu numbers and setting values). https://www.qsl.net/k7jar/pages/D700Cmds.html

[5] CHIRP users mailing list, "Has anyone successfully programmed a Kenwood TM-D700 with Chirp?" (2017). https://lists.chirpmyradio.com/hyperkitty/list/users@lists.chirpmyradio.com/message/X2SP6U4BDTPONOGOG3G6QPFMYN5RVMAO/

[6] RadioReference forums, "Kenwood TM-G707A programming" (COM port numbering with Kenwood MCP software). https://forums.radioreference.com/threads/kenwood-tm-g707a-programming.500172/

[7] Microsoft Q&A;, "USB Serial Adapter COM Port Assignment Changes on Windows 10 Reboot". https://learn.microsoft.com/en-in/answers/questions/363074/usb-serial-adapter-com-port-assignment-changes-on

[8] Microsoft Learn, "64-bit versions of Windows don't support 16-bit components, 16-bit processes, or 16-bit applications". https://learn.microsoft.com/en-us/troubleshoot/windows-client/application-management/x64-windows-not-support-16-bit-programs

[9] Microsoft Support, "Error opening Help in Windows-based programs: Feature not included or Help not supported" (KB917607). https://support.microsoft.com/en-us/help/917607/error-opening-help-in-windows-based-programs-feature-not-included-or-help-not-supported

[10] CHIRP issue tracker #23 (TM-D700 needing 9600 baud). https://chirpmyradio.com/issues/23

[11] eHam.net, Kenwood TM-D700A owner reviews (Kenwood software blocking 400-410 MHz entry). https://www.eham.net/reviews/view-product?id=1118&page=8&per-page=10

[12] aprs.fi blog, "How APRS paths work" (2020). https://blog.aprs.fi/2020/02/

[13] AMSAT-BB mailing list, "TNC settings for Kenwood TM-D700" (2007): straight-through cable, 9600-8-N-1 with hardware flow control. https://mail.amsat.org/archives/pipermail/amsat-bb/2007-March/003870.html

[14] Kenwood, *TM-D700A/E Instruction Manual*, as reproduced at ManyManuals (mute, S-meter squelch, PM, lock, visual scan). https://kenwood.manymanuals.com/car-speakers/tm-d700-e/user-manual-46282

[15] Appalachian Trail Golden Packet, "Kenwood TM-D700A configuration" (full reset, key function Mode 3). https://www.atgoldenpacket.net/radio-configs/kenwood-tm-d700a-atgp-config/

[16] Kenwood, *TM-D700A/E Instruction Manual* B62-1228-20 (99 pages). Checked against a PDF copy and the ManualsLib copy: connectors p.12, button labels p.16 and p.67, PM p.42-45, resets p.41, A.B.C. and locks p.66-67, AIP and S-meter squelch p.68-69, TOT/APO p.70, speakers p.72, repeater function. https://www.manualslib.com/manual/86117/Kenwood-Tm-D700-E.html

[17] Kenwood, *TS-2000/2000X/B2000 Instruction Manual*, "Sky Command II+" section, as hosted by ManualsDir (pages 91-92). https://www.manualsdir.com/manuals/162011/kenwood-ts-2000x-ts-2000-ts-b2000.html?page=91

[18] Kenwood, *Sky Command System II* (TH-D72 manual chapter listing compatible radios). https://w7apk.com/kenwood-th-d72a/TH-D72_12_SKY%20COMMAND_E.pdf

[19] Kenwood USA, "SkyCommand System II+ Setup and Configuration" (2005). http://www.iw2noy.it/KS/TS2000_SkyCommand.pdf

Sharing and use

MCP-D700 Made Simple was created by **N8GMZ** for the amateur radio community and is published at www.WE8CHZ.org. Copyright © 2026 N8GMZ / WE8CHZ.org. All rights reserved except as granted below.

You are welcome to

- Download, print, copy and share this guide for free: with your club, ARES/RACES or emcomm team, on a website, a mailing list or a forum.
- Hand out printed copies at meetings, classes and hamfests, as long as you only charge what the printing actually costs, or nothing.
- Quote short sections, as long as you credit "N8GMZ, www.WE8CHZ.org".

You may not

- Sell this guide, in print or electronic form, or charge for access to it.
- Include it in any product, kit, bundle, course or download that is sold, including radios, cables or software sold "with free manual".
- Remove or change the author credit, this notice, or the copyright line.
- Republish an edited version as your own work. If you spot an error or have an addition, send it to the author through www.WE8CHZ.org so everyone gets the fix.

Anyone wanting to use this guide commercially must get written permission from the author first. Any version found for sale was not authorized; please let the author know.

Fine print

This guide is provided as-is, without warranty. Programming or modifying a radio is done at your own risk; always save a backup first. You are responsible for operating within the rules of your license and the radio service you use. Kenwood, TM-D700, MCP-D700 and SKY COMMAND are trademarks or product names of JVCKENWOOD Corporation, which has not reviewed or endorsed this guide. The underlying facts come from the sources listed on the previous page; the wording, organization and explanations are original to this guide.