The following commands are for the TH-D7(G) upgraded model. In blue are changes from TH-D7A. For Info on the TH-D7A please see Darryl's VK2TDS web page .

Command	Name	Use
AI n	Auto Information	This function will automatically display status information and functions as they are pressed on keypad. This is usefull for monitoring changes, such as squelch opening up, or new station heard, etc. 0=off, 1=on
AIP n	Advanced Intercept Point	0=off, 1=on
AMSG [00-16]	APRS Message	To send a message use AMSG 00,KD6VYV-7,text goes here To view a message use AMSG n , where n = number of message 01-16
AMGG	Message Group	Enter groups to receive messages for: such as QST,CQ or "*" to receive all
AMR n	Auto Message Reply	0=off, 1=on
APO n	Auto Power Off	0=off, 1=30min, 2=60min
ARL [0000-2500]	APRS Position Limit	0000=off, miles/kilometers in increments of 10, 0010-2500miles
ARLM	Auto Message Reply Text	Sets or displays ARLM text
ARO [0-1]	Auto Repeater Offset	0=off, 1=on
ASC [0-1]	Auto Simplex Check	0=off, 1=on
BAL [0-4]	Ballance A/B band	(n=0 to 4) 0=band a only 2=middle 4=band b only
BC [0-1]	Band A & B	Sets band, or displays current band 0=band A, 1=band B
BCN [0-1]	APRS Beacon	0=off, 1=on , or displays current status
BEL [0-1]	Tone Alert	Turns band A or B tone alert on or off 0=off, 1=on
BEP [0-1]	Key Beep	0=off, 1=on
BEPT [0-3]	Tone Alert	(0=off, 1=mine, 2=all new, 3=all) Produces a distinct tone for APRS events
BUF [0-1]	Buffer	Shows current buffer data, or you can enter new: BUF [Band selection],[Frequency],[Frequency step size],[Shift],[Reverse],[Tone],[CTCSS],,[Tone frequency],,[CTCSS frequency],[Offset],[FM/ AM]
BY	Busy	Displays busy status 0=not busy, 1=busy
CH [0-1]	Channel Display	Turns the channel display on n=1 or off n=0
CIN	Call Channel Input	Enters the transceiver's displayed frequency into the CALL channel
CNT [01-16]	Contrast	LCD contrast default = 8
CR [0-1],[0-1]	Read Call Channel	Displays call channel status CR [Band selection],[Split selection],[Frequency],[Frequency step size],[Shift],[Reverse],[Tone],[CTCSS],,[Tone frequency],,[CTCSS frequency],[Offset],[FM/ AM] Split selection: 0=receive side of split, 1=tx side of split
CT	CTCSS	Turns CTCSS on or off, or displays status
CTD	CTCSS Detection	Displays whether the CTCSS tones match, or don't match
CTN	CTCSS Tone	Selects, or displays a CTCSS tone
CW [0-1],[0-1]	Write to Call Channel	Enters data to the Call channel Cw [Band selection],[Split selection],[Frequency],[Frequency step size],[Shift],[Reverse],[Tone],[CTCSS],,[Tone frequency],,[CTCSS frequency],[Offset],[FM/ AM] CW 0,0,00144410000,0,0,0,0,0,,09,,09,000600000,0 Split selection: 0=receive side of split, 1=tx side of split
DL	Dual Band	Selects single or dual band mode, or displays current status
DM	DTMF Memory	Sets the DTMF memory, or displays its current status
DMN	DTMF Memory Name	Sets up the DTMF memory name, or displays it

DMN	DTMF Memory Name	Sets up the DTMF memory name, or displays it
DS	DCD Sense	Checks for a busy signal on the data band, or displays its current status 0=ignore DCD, 1=Data or TX Band, 2=Both Bands
DTB n	Data Band	0=Band A, 1=Band B, 2=Band A tx - Band B rx, 3=Band B tx - Band A rx
DTX n	Beacon TX Method	0=manual, 1=PTT, 2=auto
DUP n	Duplex Mode	selects duplex or simplex mode, or displays current setting 0=simplex 1=dup
DW	Down (freq)	Frequency moves down one step
ELK n	Tuning Enable	Locks or unlocks rotary encoder knob tuning 0=enabled unlocked, 1=disabled
FQ [freq],band	Frequncy	Returns or sets current frequency Format= FQ 00144410000,0 frequency,step
GU	GPS Used	0=none, 1=NMEA, 2=NMEA 9600 buad
ICO g,n	Icon	Select Icon when g=0 graphical icons n=0 to 9 and A-E when g=1 other icons n=aprs icons such as "/b" etc.
ID	Identity of Radio	Returns ID TH-D7G
KILO n	Kilometer/Mile	0=mile increments, 1=kilometer
LIST [01-40]	List	Displays information on received station in APRS
LK	Transciever Lock	Turns off=0, and on=1 the key lock,or displays current status
LMP	Lamp	turns on or off the LCD lamp, or displays its current status
MC [0,1],n	Memory Channel	Selects a memory channel number, or displays current number [Band],000-200
MCL [0,1],n	Lock Memory Channel	[Band],n where n=0 unlock, n=1 lock
MD n	Mode	Sets up the receiver mode, or displays its current status 0=FM, 1=AM
MES	Power up Message	Default Hello! 8 characters max
MIN [000 to 199]	Memory Input	Copies current frequency to desired channel
MNA 0,[000-199],n	Memory Name	Sets or displays a channel memory name n=name
MNF	Memory Name Frequency	Change between name and frequency 1=freq, 0=name
MON [0,1]	Squelch	Turns on and off squelch, or displays its current status 1=busy
MP [1-3],d	My Postition	Sets, or displays one of three programable positions MP 1,37001500121349601 where 37deg, 00.150sec 0=north 121deg, 34.960min 1=west
MR 0,[0-1],[mem],d	Memory Read	Recalls the memory channel example: MR 0,0,001,00440000000,6,0,0,0,0,,09,,09,000000000,0,0 d: [Frequency],[Frequency step size],[Shift], [Reverse],[Tone],[CTCSS],,[Tone frequency],, [CTCSS frequency],[Offset],[FM/ AM],[Lockout]
MSH	Memory Shift	Transfers the displayed memory channel into the VFO
MW	Memory Write	Enters data into the memroy channel - format similar to MR
MYC s	My Call Sign	enters or displays your call sign s=callsign goes here
NSFT	Noise Shift	Can be used to get rid of beat type noise that can be associated with tnc
OS	Offset	Sets up or displays the offset frequency
		Sets ambiguity so that others will not know your exact location

PAMB	Pos Ambiguous	Settings: 0=off, 1=1 digit, 2digit, 3 digit, 4 digit
PC [0-1],r	Power Control	Sets or displays the transmit power Band 0 or 1, r: 0=H power, 2=L, 3=EL
POSC	Position Comment	Sets the position comment to use for APRS 0=Off Duty, 1=Enrout, 2=In Service, 3=Returning, 4=Commited, 5=Special, 6=Priority, 7-13=Custom 0-6, 14=Emergency
PKSA	APRS Packet Speed	0=1200 baud, 1=9600 baud
PP	Packet Path	can now use w for wide and t for trace
PT [0-6]	DTMF Pause Time	0=100ms, 1=200, 2=500, 3=750, 4=1000, 5=1500, 6=2000
PV [1-3 or 6] L1,L2	Program VFO	Sets or displays the current VCO Examle: PV 2,00136,00173 1=118mhz band, 2=2 meter band, 3=sub two meter band, 6=uhf band L1=Limit1, L2=Limit2
RBN [1-3 or 6]	Set Band	1=118mhz band, 2=2 meter band, 3=sub two meter band, 6=uhf band
REV [0-1]	Reverse	
RX	Receive	Switches the transceiver to receive mode
SC [0-1]	Scan	Scans current band 0=stop, 1=start
SCR [0-2]	Scan Mode	Sets up or displays current scan mode 0=time, 1=carrier, 2=seek mode
SFT [0-3]	Shift	0=simplex, 1=+, 2=-, 3=-7.6Mhz
SM [Band 0-1],n	Signal Meter	Displays the received signal strength (or battery meter while tx) n=0-5
SQ [Band 0-1],n	Squelch	Displays or sets the squelch level n=0-5
ST [0-9]	Step	0=5, 1=6.25, 2=10, 3=12.5, 4= 15, 5=20, 6=25, 7=30, 8=50, 9=100
STAT [1-3],text	Status Text	Status Text for APRS. There are 3 different memories available
STXR [0-8]	Status Text tx	0=off, 1=1/1, 2=1/2, 3=1/3, 4=1/4, 5=1/4, 6=1/6, 7=1/7, 8=1/8
SV [0-9]	Battery Save	0=off, 1=.2s, 2=.4s, 3=.6s, 4=.8s, 5=1s, 6=2s, 7=3s, 8=4s, 9=5sec
TC/TS		
TH [0-1]	Transmit Hold	After sending a 1750hz tone, sets or displays status 0=off, 1=on
TEMP [0-1]	Temperature	0=Farenheit, 1=Celcius
TN [00-39]	PLL Tone	Sets subaudible tone
TNC [0-1]	TNC	Turns TNC on or Off 0=off, 1=on
TO	PL Tone Enable	0=off, 1=on
TSP	DTMF TX Speed	0=fast, 1=slow
TT	Transmit Tone	Transmits 1750hz tone until RX is entered
TX	Transmit	Starts transmitting on current band - can be stopped by RX command
TXD [1-7]	APRS TX Delay	1=100ms, 2=200ms, 3=300ms, 4=400ms, 5=500ms, 6=750ms, 7=1000ms
TXH	TX Hold on/off	Turns TX HOLD on or off
TXI [0-8]	APRS TX Interval	0=.2min, 1=.5min, 2=1min, 3=2min, 4=3min, 5=5min, 6=10min, 7=20min, 8=30min
TXS [0-1]	TX STOP	Inhibits TX
TZ [00-48]	Time Zone	00 is -12 hours from UTC, 10 is -7 ... etc
*UNIT		No longer used due to addition of TEMP and KILO
UP	UP	Moves up one memory channel or up one step in VFO mode
UPR	Unproto	Unproto String Default APK002
VMC [0-1],[0-3]	Mode of Band	0=VFO, 2=MR, 3=Call
VR [1-3 or 6]	VFO Read	Reads VFO of specified band
VW	VFO Write	Writes VFO to specified band
WAY [0-6]	Waypoint	0=off, 1=6 digits out NMEA, 2=7, 3=8, 4=9, 5=6 digits out MGN, 6=DGPS

link7 Download

History (reverse chronological order)

5/5/00 - Version 1.0.1.4 Fixed problem with uploading of split channels. No one reported this one: I found it while working on link700.

3/30/00- Verision 1.0.1.3 Fixed problem with D7E downloads

3/27/00- There is a problem with link7 downloading the TH-D7E. Anyone with an "E" version please wait until the fix has been posted before downloading.

3/26/00- Version 1.0.1.1 Fixed problem running link7 on computers set for languages that use a "," for a decimal point. On entering a field via a mouse click, the entire field is selected.

3/21/00 - inital release Version 1.0.1.0

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return to my link7 page

..\..\kg7il.htm..\..\kg7il.htmKG7IL home page - ..\ham.htm..\ham.htmBack to Ham Page

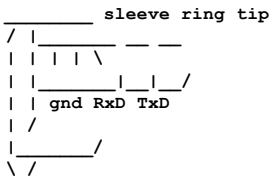
PinOut Help for the TH-D7A

Thanks to Edward A. Behl - KG4ALG for this newsgroup post

12/28/99 9:38 PM
Subject: [htaprs] Re: Software Programming the TH-7DATo: "TAPR HT APRS Special Interest Group" <htaprs@lists.tapr.org>
CC: TAPR HT APRS Special Interest Group <htaprs@lists.tapr.org>

Paul-

According to Pages 52 and 63 of the current TH-D7 manual, the GPS and PC serial ports are identical, though the data rate defaults to 9600 bps for the PC port, and 4800 bps for the GPS port. You'll find wiring instructions on page 52 if you have the new enhanced manual (B62-1004-10 on the front cover). The 2.5mm phone plugs have three conductors; tip, ring, and sleeve, as shown below.



The sleeve is the signal common for the data lines. Tip is transmit data *from* the TH-D7. The Ring conductor is receive data *toward* the TH-D7. On the GPS cable supplied with my TH-D7, the Sleeve contact is connected to the cable shield braid. Tip is connected to a white wire. Ring is connected to a red wire.

To make the equivalent of PG-4W cable, connect the GPS cables as shown in the table below.

```
Kenwood TH-D7 GPS Cable used for PG-4W Connections
--------------------------------------------------
GPS Cable TH-D7 Signal Direction PC Signal 9-Pin 25-Pin
------------- ------------ --------- --------- ----- ------
Shield (sleeve) Ground <--> Ground 5 7
Red (ring) Rx Data <--- Tx Data 3 2
White (tip) Tx Data ---> Rx Data 2 3
```

One bit of advice – as you no-doubt have noticed, the GPS cable conductors are made with two strands of copper about the thickness of a human hair (well, not really, but it is a mighty delicate cable). Be sure to allow plenty of strain relief slack in the cable between the PC connector pins and the cable clamp in the connector hood so that the tiny wires aren't easily broken.

As far as the Kenwood MCP-D7 software available on their FTP site, I use it and it works fine, although Kenwood states clearly on the FTP site that the software is a *beta* version. If they have released a final version, it is only available with the CD-ROM included with their PG-4W cable. I can even cut and paste (channel by channel) between the TM-V7 programmer and the TH-D7 programmer. I presume the same would be true

between any of the Kenwood transceivers that are PC programmable.

One other note: Although I did not buy one, I have studied the Kenwood PG-4W package, which includes a cable with molded connectors on each end. This cable assembly is MUCH more rugged than the frail GPS cable supplied with the radio. It also is equipped with clamp-around ferrite RF chokes at each end of the cable to trap stray RF traveling between the radio and PC. At $54.95, it's a little (no, on second thought, a lot) steap for a cable alone (and this one contains no electronics), but it does include a CD-ROM with a copy of the MCP-D7 software and a PDF version of the new TH-D7 user manual. (Now, if it included a PDF of the service manual, it would be a great deal!)

I hope this helps.

73 and have a Happy New Year!

Edward A. Behl - KG4ALG

A Review: The Kenwood
TH-D7A dual-band data HT

By Alan Crosswell, N2YGK

I recently gave myself the opportunity to buy the new Kenwood TH-D7A HT: I killed my old HT trying to repair it. I had heard about the TH-D7 from the APRS special interest group Internet mailing list (You can subscribe by following the links at http://www.tapr.org). Besides being a modern dual-band (2m/70cm) HT with the usual features, it also contains a 1200/9600 baud packet TNC, including special support for APRS, DX PacketCluster, SSTV, and Kenwood Sky Command remote base control. MSRP is $499. Current street prices are around $439-469.

The Usual and Some Unusual HT Features

As with comparable voice-only VHF/UHF HT's the TH-D7 has 200 memories, selectable bands on the two VFOs: V/U, V/V, U/U, automatic repeater offset selection, and wide-band receive features, including AM airband. Memories can be used for either band -- they are not split into a group for each band like on some rigs. Alphanumeric, mixed-case names of eight characters can be assigned to each memory.

One unusual feature, or at least new to me, is the well-designed menu system. This is a pleasant surprise from a manufacturer with a reputation for hard-to-remember multi-key combinations for programming (owners of the TH-79 and TM-733 will know what I mean). All functions can be performed one-handed, mostly with your thumb, while holding the radio in the palm and have keypad shortcuts as well as menus that are scrolled through using a 4-way arrow key: up, down, left (also used as Escape or back), and right (also used as Enter or confirm). All menus have text prompts that guide you through the choices. There are only two functions that require holding a key down more than briefly: power on/off and keypad lock. Of course, many functions do require multiple key presses, but the most common are on single keys.

Another strange feature is that the one knob on top of the radio controls tuning (can be used interchangeably with the up/down arrows) and volume for both bands; Squelch level is a function key combination (F key followed by hitting the monitor button and then scrolling up or down using the arrows or tuning knob). Also, there is only one volume knob for both bands: use the BAL key to adjust the balance between the two.

In a return to HT basics after a couple years of 1/2 watt HTs being the norm, the standard supplied 9.6V NiCD battery pack develops 5 watts out. Low power settings of 2 and 1/2 watt are also available. The anntena uses the now-common SMA threaded connector rather than a BNC, so you can't just use your BNC after-market duck. Screwing the antenna on is somewhat stressful if you're afraid of cross-threading it like me. The supplied antenna is pretty good, but as usual, an 18-inch extended duck from Comet or Diamond works better. And, you'll want to get an SMA-to-BNC adapter so you can connect to a magmount or other antenna. These adapters are not so hard to find once you realize that Yaesu sells one for their newer HTs that use the same SMA connector.

As I'll get to below, the TH-D7 has serial ports for RS-232 communications. Using free Windows software available on the Kenwood web site (http://www.kenwood.net) you can program all the memories and other options and save your configuration in a file. The user interface for this software is quite nice, and the configuration files are plain text that can easily be hand-edited if you pref not to use the gooey interface:-) The same web site has a PDF version of the user manual so you can use the free Adobe Acrobat Reader to have a backup copy of the printed manual.

Packet Stuff

Here's where the TH-D7 gets very different from other HTs. The TH-D7 has a built-in dual-speed packet Terminal Node Controller (TNC) very much like a Paccomm, MFJ, Kantronics or other TAPR TNC-2 clone that includes a GPS connection.

The TNC has two modes: one that is like a TAPR APRS Mic Encoder and more. The other that is like a conventional TNC-2. In the Mic Encoder mode, you don't need anything else besides the radio to participate as a full two-way APRS user – you can send and receive position reports and short text messages: Text is entered using the keypad in a somewhat tortuous manner: To get the lowercase "c" simply press the ABC/2 key six times (ABCabc)!. However, those familiar with the Mic Encoder know that it has seven canned status messages (Off duty, Enroute, In Service, Committed, Special, PRIORITY, EMERGENCY) that are selectable from a menu so it works quite well for public service.

Your position (latitude and longitude) is entered either manually, via the menu system, or by attaching a GPS receiver to the GPS jack on the side of the HT. Once you've entered your position, received APRS reports are displayed along with a compass direction and distance from you. This is where the TH-D7 is more than a Mic-Encoder: The Mic-E only transmits APRS reports on the end of your voice transmissions. The TH-D7 does this and can also receive reports and messages and respond to them. Typically, in this two-way mode you would operate on 144.39 but without the typical computer, TNC, radio and rats nest of interconnecting cables. Some APRS TH-D7 users are sending each other two-way text via the APRS RF-to-Internet (and back) gateways. Furthermore, if your GPS supports waypoint display, the TH-D7 uploads received APRS position reports to your GPS so the callsigns of other APRS users can be mapped for you. To avoid clutter, a distance filter is available that ignore reports containing a position outside a given radius.

While in the APRS mode, the TH-D7 will also decode and display DX Packet Cluster spots. Again, this is just the HT alone – with no computer attached.

If that weren't enough, the TH-D7 has a computer serial port on the side. Plug in your computer and you get a TNC-2 clone that operates at 1200 and 9600 baud. The TNC-2 implementation is fairly complete and even includes an undocumented KISS mode. At this point documentation of the full feature set and limitations of the TNC is not available so there's been a lot of guess work. For instance, since the serial port requires software flow control, it is unclear how this interacts with KISS which usually uses hardware flow control. Also, the AX.25 window size is one packet. "Real" TNCs usually allow 3-7 outstanding packets. And, digipeating is not available. The worst feature of this TNC is it does not remember any settings other than MYCALL. So your computer will have to reconfigure the TNC each time you use it and, you can't configure the TNC once and then connect a dumb peripheral like a printer and have it just work.

1200 and 9600 baud do work though! I've used it to connect to Rich's BBS (BBSQJA) and to a 9600 baud user node on Long Island. I'm sure there will be more to come on this aspect of the TH-D7.

There were a few software bugs discovered in the first lot of TH-D7's sold. Among other things, they fail to work with other than Garmin and Eagle Explorer GPS – actually, any GPS that sends positions with other than three decimal places of precision. Kenwood has announced that a firmware upgrade program is in the works and will be available shortly as a warranty-covered repair.

SSTV and Sky Command

The TH-D7A also has special features to support the VC-H1 Slow-Scan TV camera that Kenwood came out with a few months ago. You'll probably want to talk to Anthony, N2NWZ, about the SSTV features of the TH-D7 since he's got one along with the VC-H1!

Finally, Sky Command, is a remote base feature for some Kenwood rigs. If you can afford a pair of TH-D7's and a base rig that supports Sky Command, please adopt me!

The TH-D7 on the Internet. Check out Dave Van Horn's unofficial Kenwood TH-D7 page at http://www.cedar.net/users/dvanhorn/kenwood.html and the "APRS HT" special interest group at Tucson Amateur Packet Radio: http://www.tapr.org..

APRS Menu	Use this:	To do this:
My Callsign	MYC	Checks MYCall for the TNC
	MYC N0RMO-8	Set MYCall to xxxxx
GPS Unit	GU 0	NOT USED
	GU 1	NMEA
	GU 2	NMEA96
Waypoint	WAY 0	OFF
	WAY 1	6 DIGITS NMEA
	WAY 2	7 DIGITS NMEA
	WAY 3	8 DIGITS NMEA
	WAY 4	9 DIGITS NMEA
	WAY 5	6 DIGITS MAGELLAN
	WAY 6	DGPS
My Position	MP 1,data	MP 1,41213570095593351
	MPNA 1,name	MPNA 1,Home
		MP 1,data sets My Position #1 to 41 21.35N 95 59.33W, and you must use MPNA x,name to set the desired name for that position memory. Please substitute your own position

		memory. Please substitute your own position as the weight of all those icons over my home will no doubt collapse my walls. It appears that the 0 or 1 in the 8th and 17th digit indicate N S E or W (I think you get the idea).
Position Ambiguity	PAMB 0	OFF
	PAMB 1	1 DIGIT
	PAMB 2	2 DIGITS
	PAMB 3	3 DIGITS
	PAMB 4	4 DIGITS
Position Comment	POSC 00	Off Duty
	POSC 01	Enroute
	POSC 02	In Service
	POSC 03	Returning
	POSC 04	Committed
	POSC 05	Special
	POSC 06	PRIORITY
	POSC 07	CUSTOM 0
	POSC 08	CUSTOM 1
	POSC 09	CUSTOM 2
	POSC 10	CUSTOM 3
	POSC 11	CUSTOM 4
	POSC 12	CUSTOM 5
	POSC 13	CUSTOM 6
	POSC 14	EMERGENCY !
Position Limit From 0 to 2500 Miles, in 10 Mile steps only.	ARL 0000	Off
	ARL 0010	10 Miles
	ARL 0020	20 Miles
	ARL 0030	30 Miles etc...
	ARL 2500	2500 Miles
		From 0 to 2500 Miles, in 10 Mile steps only.
Station Icon	ICO 0,0	"W" Kenwood Logo Icon
	ICO 0,1	House
	ICO 0,2	Tent
	ICO 0,3	Sailboat
	ICO 0,4	SSTV
	ICO 0,5	Airplane
	ICO 0,6	Boat
	ICO 0,7	Car
	ICO 0,8	Motorcycle
	ICO 0,9	Car????
	ICO 0,A	Bus???
	ICO 0,B	Pickup
	ICO 0,C	Van
	ICO 0,D	18-Wheeler
	ICO 0,E	DIGI Star
	ICO 0,xx	Others
	example ICO 0,\L	Where xx= \x or /x depending on the table and symbol you want. See APRS documentation or the radio user's manual.
Status Text		
	STAT 1,text	STAT 1,This is my status text n0rmo@qsl.net 28 character maximum. Use STAT X with X being the number of the status (1 to 5) you want to program.
	UMSG 1 or UMSG 2 etc.	Use UMSG X where X is the status number (1 to 5) you want to USE or "make active".
Status TX Rate		
	STXR 0	OFF - do not send a status text
	STXR 1	1/1 - Send a status text every posit.
	STXR 2 etc.	1/2 - Send a status text every 2nd posit. etc.
	STXR X	1/X - Where X is from 1 to 8
Packet Path	PP x,x,x etc.	PP RELAY,WIDE,WIDE etc PP sets the path; substitute the text of the path you want to set.
Packet TX	DTX 0	Manual - Sends beacon manually only
	DTX 1	PTT - Sends beacon after PTT only after INTERVAL expires

	DTX 2	AUTO - Send beacon every INTERVAL
TX INTERVAL	TXI 0	0.2 Minutes
	TXI 1	0.5 Minutes
	TXI 2	1 Minute
	TXI 3	2 Minutes
	TXI 4	3 Minutes
	TXI 5	5 Minutes
	TXI 6	10 Minutes
	TXI 7	20 Minutes
	TXI 8	30 Minutes
		These are the only settings available, just as in the TH-D7A.
Unprotocol	UPR APK101	This is the default setting. Substitute your desired Unprotocol for APK101 if necessary. Remember that APRS software requires AP as the first two characters to properly decode it as APRS traffic (I think - Authors, correct me on this one if wrong).
Beep	BEPT 0	OFF
	BEPT 1	MINE
	BEPT 2	ALL NEW
	BEPT 3	ALL
Mile/Kilometer	KILO 0	MILE Unsure whether MILE is Statute or Nautical Mile. Guess I need to RTFM.
	KILO 1	KM
Temperature	TEMP 0	Degrees Farenheit
	TEMP 1	Degrees Celsius
		Sorry, no Kelvin for you Martians traveling the Universe.
Data Band	DTBA 0	A only
	DTBA 1	B only
	DTBA 2	A: TX B:RX
	DTBA 3	A: RX B:TX
		See also RADIO Menu TNC Submenu. Don't know why there are two separate commands for the same function.
Packet Speed	PKSA 0	1200 bps
	PKSA 1	9600 bps
Digipeater	DIG 0	OFF
	DIG 1	ON
UIDIGI	UDIG X	UDIG X where X is the list of callsigns you want to DIGI by. Example: UDIG EVENT,WIDE Will digi packets with EVENT or WIDE in the path. Use this smartly... see TAPR APRSSIG or manual for further info.
Auto Msg Reply	AMR 0	OFF
	AMR 1	ON
		In APRS mode, if you get a message addressed to MYC, and this command is ON, your radio will respond with the ARLM (see below).
Reply Msg	ARLM TEXT	ARLM I'm driving - will respond later You could possibly also use AA: to conform to the WinAPRS method of autoreply, to make it clear that this is in fact an automatic reply, not manually typed. 64 characters maximum. Example: ARLM AA:I'm driving - will respond when parked 73 de Jim
BLN Group	ABLG TEXT	Substitute TEXT for desired strings... see radio manual for more information.
MSG Group	AMGG TEXT	Substitute TEXT for desired strings... see radio manual for more information. Also can use AMGG * to enable ALL messages in the message list, whether they are to you or not. Handy for "reading the mail" when traveling. Thank you Bob B. for this suggestion.

RADIO Menu DISPLAY submenu	Use this:	To do this:
Power-On MSG	**MES TEXT**	**Substitute TEXT for desired string... see radio manual for more information. 8 characters maximum.**
Contrast	**CNT 01**	**Level 1**
	CNT 02	**Level 2**
	CNT 03	**Level 3 etc...**
	CNT 16	**Level 16**
		Between 1 and 16; 8 is the default. Somewhere between 7 and 10 is probably readable for you. See manual or your radio.
Reverse Mode	**NP 0**	**POSITIVE**
	NP 1	**NEGATIVE**
		Maybe NEGATIVE is easier to read at night? YMMV. Literally, I suppose.
Auto Dimmer	**AD 0**	**OFF**
	AD 1	**ON**
Key Func (Key Function)	**FUNC 1**	**FUNC 1 is default, FUNC 3 sets the APRS buttons as the "front" buttons in the soft menu on the front of the radio. I leave mine on FUNC 3 for convenience. Your choice. See the radio and your manual.**
	FUNC 2	
	FUNC 3	
RADIO Menu AUDIO submenu	Use this:	To do this:
Beep Volume	**BVOL 0**	**OFF**
	BVOL 1 to	**LEVEL 1 ...**
	BVOL 7	**LEVEL 7**
Key Beep	**BEP 0**	**OFF**
	BEP 1	**ON**
Speaker	**SSEL 1**	**MODE1**
	SSEL 2	**MODE2**
		Combines or seperates the audio from each band into the same or seperate speakers. See manual.
RADIO Menu TX/RX submenu	Use this:	To do this:
1-3-1		**The first option is not available in the radio menu... don't know why.**
S-Meter Squelch	**SSQ 0,0**	**OFF - left band**
	SSQ 0,1	**ON - left band**
	SSQ 1,0	**OFF - right band**
	SSQ 1,1	**ON - right band**
Squelch Hang Time	**SHT 0**	**OFF**
	SHT 1	**125 ms**
	SHT 2	**250 ms**
	SHT 3	**500 ms**
FM/AM Mode	**MD 0**	**FM**
	MD 1	**AM**
		This option only available for certain frequency ranges... and I think only on the left side band. Correct me if I wrong.
VHF AIP (Advanced Intercept Point)	**AIP 0**	**OFF**
	AIP 1	**ON**
RADIO Menu MEMORY submenu	Use this:	To do this:
Auto PM Store	**PMM 0**	**ON**
	PMM 1	**OFF**
Channel Display	**CH 0**	**OFF**
	CH 1	**ON**
		Changing this option will cause the radio to spit out a whole bunch of channel information, which causes the radio's display to show the type of information you have selected. More later on exactly what the radio is spitting out. BUT, if you turn Channel Display ON, you won't be able to see the frequencies - only the channel number**.**
Lockout	**MCL 0,0**	**OFF - for current channel on left band**
	MCL 0,1	**ON - for current channel on left band**
	MCL 1,0	**OFF - for current channel on right band**
	MCL 1,1	**ON - for current channel on right band**

		NOTE: affects the currently selected memory channel on the currently selected band. If you are intending to remotely change this option for a specific memory channel, you MUST change to the specific band and channel remotely before you issue the MCL command. See HERE** **for more information. (**section to be developed soon)**
Memory Name	**MNA X,XXX,TEXT**	**MNA 0,001,APRS** **For example, programs channel 001 to the Memory Name Text** APRS**. I don't think you have to previously select the proper band and channel before you issue this command... using the proper 3 digit channel number programs the correct memory.** **In the absense so far of specific software to program the D700, this command is a MAJOR help when going through and setting your memory names. It took me a long time to do it through the keypad until I found this.** Can you say Major Timesaver? **I knew you could.**
RADIO Menu DTMF submenu	Use this:	To do this:
Store	**DMN 00,X**	**Sets the DTMF Name for specific DMTF memory location 00-09.**
	DM 00,X	**Sets DMTF string for the specific memory location of 00 through 09. See manual.**
TX Speed	**TSP 0**	**SLOW**
	TSP 1	**FAST**
Pause	**PT 0**	**100 ms**
	PT 1	**250 ms**
	PT 2	**500 ms**
	PT 3	**750 ms**
	PT 4	**1000 ms**
	PT 5	**1500 ms**
	PT 6	**2000 ms**
RADIO Menu TNC submenu	Use this:	To do this:
Data Band	**DTB 0**	**A only**
	DTB 1	**B only**
	DTB 2	**A: TX B:RX**
	DTB 3	**A: RX B:TX**
		See also APRS Menu. Don't know why there are two separate commands for the same function, unless if separate for APRS mode and TNC mode.
DCD Sense	**DS 0**	**DATA (RX) BAND**
	DS 1	**A AND B BANDS**
Time	**TIME XXXX**	**TIME 0130 sets 1:30am** **TIME 2130 sets 9:30pm etc etc.**
Date	**DATE XXXXXX**	**DATE 000109 sets January 9 2000. etc etc.**
Time Zone	**TZ 00**	**UTC minus 12 hours**
	TZ 01	**UTC minus 11 hours 30 minutes**
	TZ 02	**UTC minus 11 hours**
	TZ 03	**UTC minus 10 hours 30 minutes** **etc. etc. every 30 minutes**
	TZ 24	**UTC**
	TZ 25	**UTC plus 30 minutes**
	TZ 26	**UTC plus 1 hour**
	TZ 27	**UTC plus 1 hour 30 minutes** **etc. etc. up to**
	TZ 48	**UTC plus 12 hours**
RADIO Menu REPEATER submenu	Use this:	To do this:
Offset Frequency	**OS 005000000**	**Offset Frequency 5.00 MHz**
	OS 000600000	**Offset Frequency 0.60 MHz**
		Indicated in Hz, with zeros padded before the desired number, for a total of 9 digits. NOTE: **affects the currently selected BAND and CHANNEL. See elsewhere in this web for how to change to a different band or channel remotely (coming soon).**
Auto Offset	**ARO 0**	**OFF**
	ARO 1	**ON**

		Not **band-specific.**
1750 Key	**CKEY 0**	**CALL**
	CKEY 1	**1750**
		See radio manual.
TX Hold	**TH 0**	**OFF**
	TH 1	**ON**
		Possibly applies only for crossband repeater. See manual.
Repeater Hold	**REPH 0**	**OFF**
	REPH 1	**ON**
		Possibly applies only for crossband repeater. See manual.
Repeater	**REP 0**	**OFF - turns cross band repeater off.**
	???	**LOCKED-BAND**
	???	**CROSS-BAND**
		Haven't messed with these yet... apparently you must cycle radio power to make the change... and since I am working diligently on finding all the codes first that will have to wait.
RADIO Menu MIC submenu	Use this:	To do this:
PF1(PF)	**PF 1,XX**	**PF1 button set to XX, see table below**
PF2(MR)	**PF 2,XX**	**PF2 button set to XX, see table below**
PF3(VFO)	**PF 3,XX**	**PF3 button set to XX, see table below**
PF4(CALL)	**PF 4,XX**	**PF4 button set to XX, see table below**
For X use the button number 1 through 4 from left to right for the Function button you want to program.		
	PF X,01	**A/B**
	PF X,02	**MONITOR**
	PF X,03	**ENTER**
	PF X,04	**VOICE**
	PF X,05	**1750**
	PF X,06	**PM**
	PF X,07	**MENU**
	PF X,08	**VFO**
	PF X,09	**MR**
	PF X,10	**CALL**
	PF X,11	**MHz**
	PF X,12	**TONE**
	PF X,13	**REV**
	PF X,14	**LOW**
	PF X,15	**MUTE**
	PF X,16	**CTRL**
	PF X,17	**PM. IN**
	PF X,18	**A.B.C**
	PF X,19	**M>V**
	PF X,20	**M. IN**
	PF X,21	**C. IN**
	PF X,22	**LOCK**
	PF X,23	**T. SEL**
	PF X,24	**SHIFT**
	PF X,25	**STEP**
	PF X,26	**VISUAL**
	PF X,27	**DIM**
	PF X,28	**SUB-BAND SEL**
	PF X,29	**DX**
	PF X,30	**TNC**
	PF X,31	**LIST**
	PF X,32	**P. MON**
	PF X,33	**BCON**
	PF X,34	**MSG**
	PF X,35	**POS**
Mic Control	**MCNT 0** **MCNT 1**	**OFF** **ON**
DTMF Monitor	**DTM 0** **DTM 1**	**OFF** **ON**
RADIO Menu AUX submenu	Use this:	To do this:
Scan Resume	**SCR 0**	**TIME**
	SCR 1	**CARRIER**
	SCR 2	**SEEK**

Visual Scan	**VSM 1**	**MODE 1: 31ch**
	VSM 2	**MODE 2: 61ch**
	VSM 3	**MODE 3: 91ch**
	VSM 4	**MODE 4: 181ch**
APO (Auto Power Off)	**APO 0**	**OFF**
	APO 1,0	**ON**
TOT (Time Out Timer)	**TOT 0**	**3 Minutes**
	TOT 1	**5 Minutes**
	TOT 2	**10 Minutes**
Com Port	**CP 0**	**9600 bps** (default)
	CP 1	**19200 bps**
	CP 2	**38400 bps**
	CP 3	**57600 bps**
		The speed at which the radio talks to a computer on its' serial port.
Data Speed		
	DATP 0	**1200 bps**
	DATP 1	**9600 bps**
		See Also: APRS Menu- Packet Speed. Don't know why there are two commands for the same thing, unless APRS Menu- Packet Speed is for the APRS mode only, and Data Speed is for TNC mode only. Will have to research.
RESET		I haven't gotten in to this one... I suggest you don't either, unless you want to spend all night reprogramming everything.
RADIO Menu REMOTE CON submenu	Use this:	To do this:
Code	**RCC XXX**	**Where XXX is the three digit** number **you want to set your remote control password code to.**
Answer Back	**RCA 0**	**OFF**
	RCA 1	**ON**
Control	**RC 0**	**OFF** **I haven't gotten further into this one. More later when I have to time play with it. See radio manual.**
SSTV Menu		Haven't worked on yet. More later. See radio manual.
SKY COMMAND Menu		Haven't worked on yet. More later. See radio manual.

For problems or questions regarding this web contact jimgill@ix.netcom.com.
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