Understanding the Mysterious Motorola Radio in Your DCS Room

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1. Background: how these radios got into your DCS room
2. Operating the Motorola radios for DCS
3. Advantages of these Motorola radios vs. ham gear
4. How to purchase identical radios for your own use

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The Motorola radio in DCS rooms originated in 2009…but most did not get installed in DCS rooms until 2012-2014

- In 2009 the LASD acquired a group of Motorola CDM-1250 and CDM 1550 mobile radios
- Objective was placing one in each DCS room
- The radios could only be programmed by the Department
- Big advantage: Great radio, and impossible for users to accidentally “muck up”
- Delays ensued, radios not installed until starting 2012

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When the Motorola radios were installed, no guidance given on how to use them—that's why we have this class

- Let's take a short video tour on how to operate your Motorola radio and what its buttons do
- The radios are easy to operate and fool-proof

Note: To enable posting this presentation on the DCS website video segments shown with this slide have been omitted due to their very large file sizes.

Need a CDM 1550 Manual for your station? Download from:

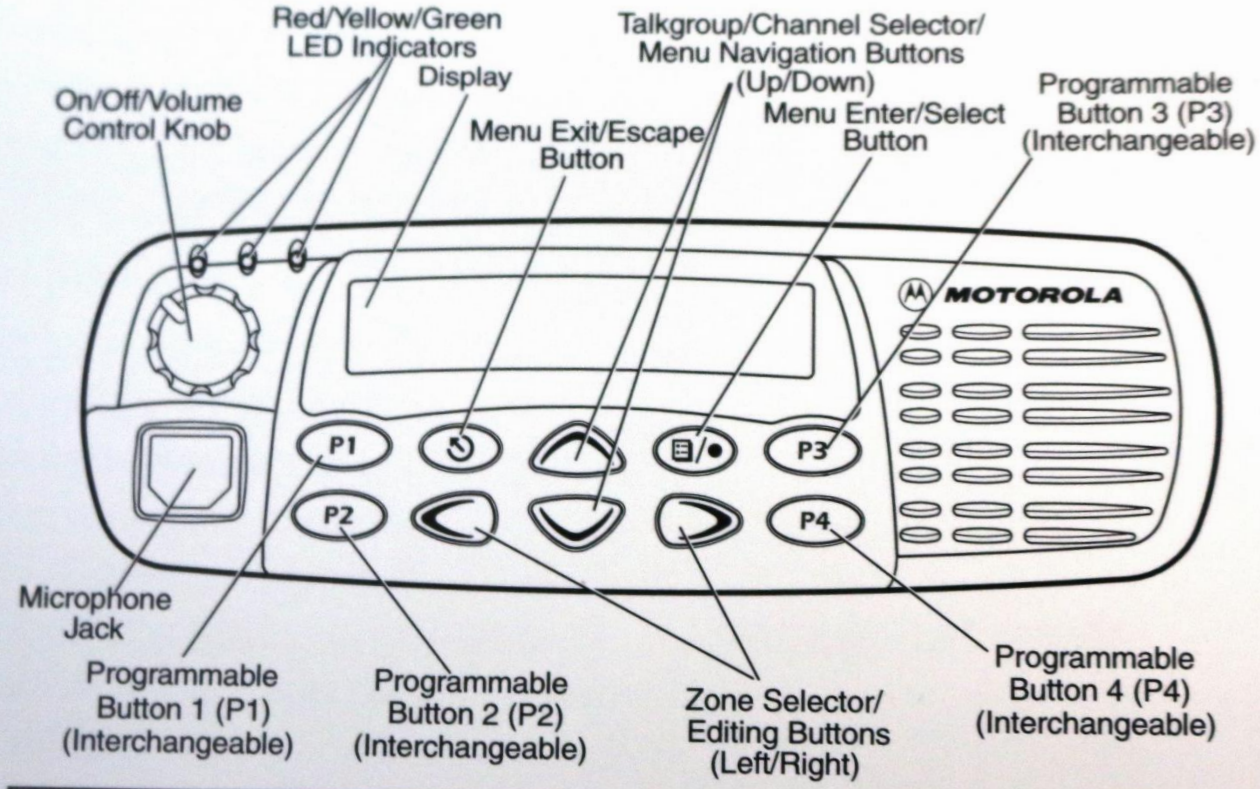
http://www.motorolasolutions.com/content/dam/msi/docs/business/_documents/user_guides/static_files/CDM1550LS-220-700-en.pdf

MOTOROLA

CDM1550•LS and CDM1550•LS+ Quick Reference Card

(Check with your dealer for the features available with your radio.)

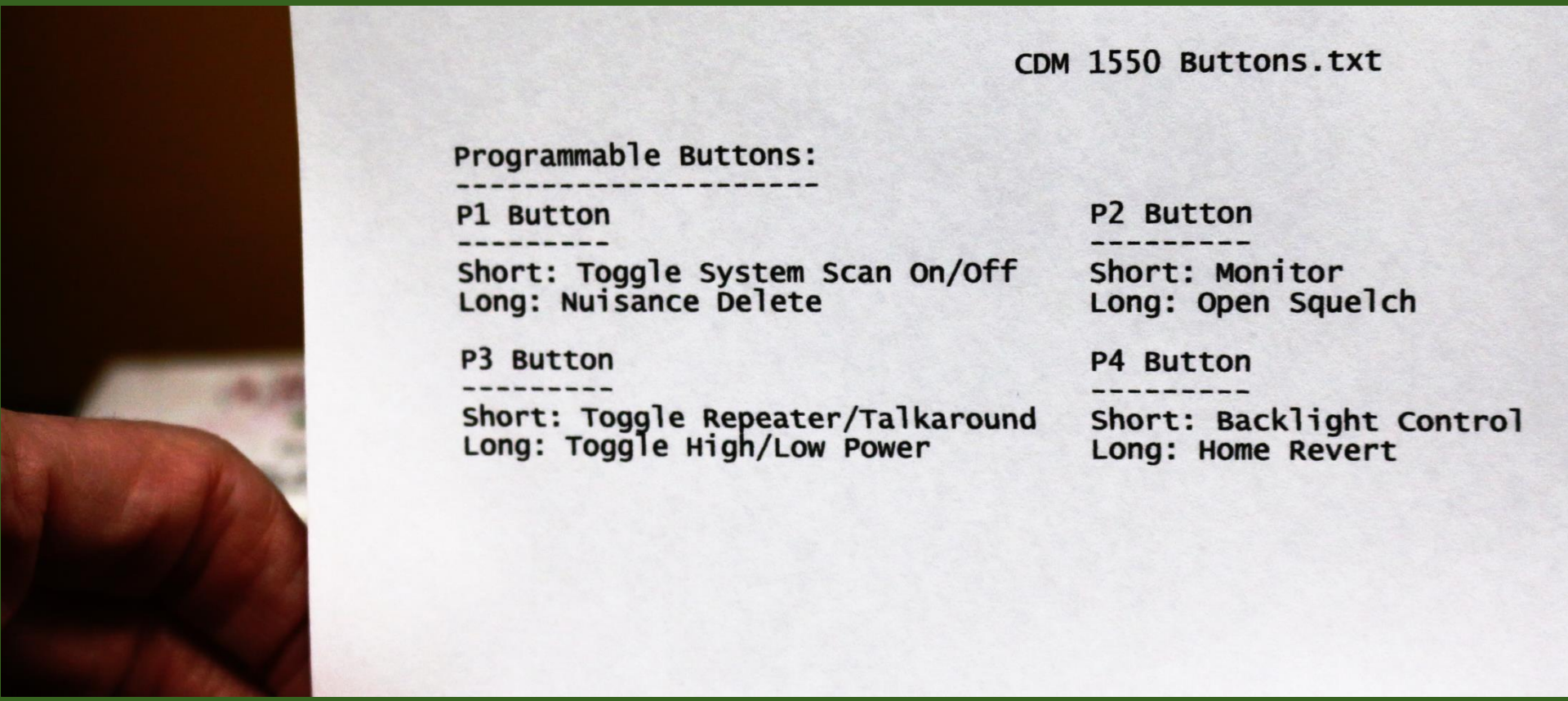
Record the functions for your radio's programmable buttons in the table provided below. For further information, see pages 21 and 21 in this User Guide.



Button	Function	Short Press	Long Press	Hold Down	Page

Let's review the operation basics

Here's how all DCS Motorola CDM-1250/1550 radios currently have their P1-P4 front buttons programmed



Going forward, the DCS Tech Team plans to have your DCS Motorola radio re-programmed with common frequency set

Future directions for your Motorola CDM-1550/1250

- DCS Tech Team needs to get all DCS Districts onto TASMA-compliant simplex frequencies
- Common frequency bank for all Districts countywide will then be loaded into all Motorola CDM radios
  - One “Zone” could cover DCS County frequencies
  - Second “Zone” could cover simplex frequencies and local repeaters used by every DCS District, enabling Station to Station contact
- Tech Team trying to get special headsets for the Motorola radios
- Some of advanced features like MDC might be implemented at later date

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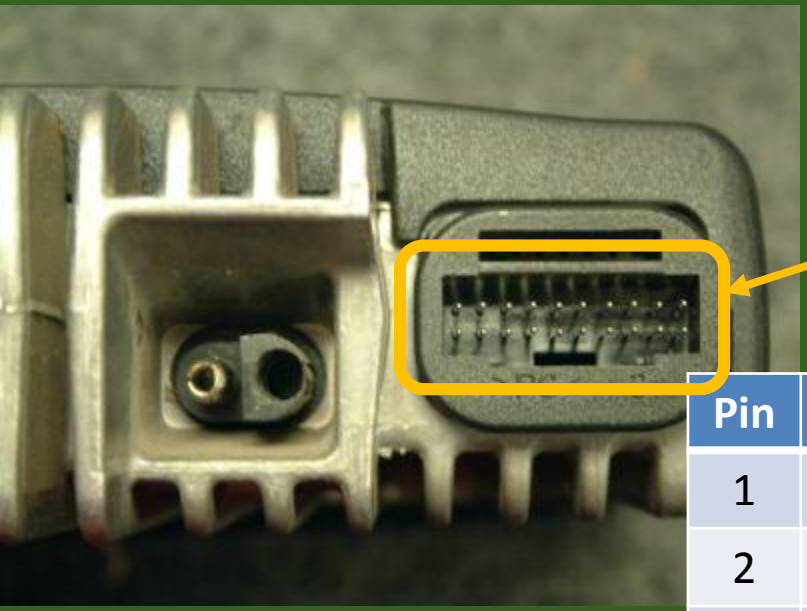
With some knowledge, these Motorola radios have many features not found on amateur units

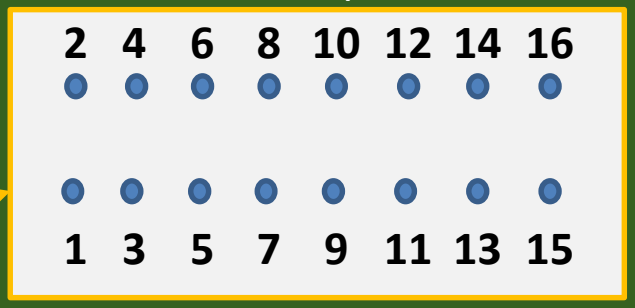
440 amateur porta-peater in use for Palos Verdes Half Marathon

Building a portable repeater is easy with two Motorola CDM 1550s

- $15 cable enables connection as repeater, safely handles 20-watts
- Use a higher-wattage model for the TX unit (left, in photo) due to larger heat sink
- UHF duplexers available for about $100
- Key to advanced features is 16-pin port on back side

The 16-pin rear connection enables radio options and configurations most amateur radios cannot achieve





Pin	Function	Pin	Function
1	External Speaker (-)	9	Emergency Alarm
2	Mic Audio	10	Ignition Control
3	Mic “Push To Talk”	11	Receive Audio
4	External Alarm	12	Programmable I/O 12
5	Flat TX Audio	13	Switch Battery Sense (+)
6	Programmable I/P 6	14	Programmable I/O 14
7	Ground	15	Internal Speaker +
8	Programmable I/O 8	16	External Speaker (+)

These Motorola radios have many other features not found on amateur units

Other aspects of CDM 1250/1550

- Excellent audio from front speaker
- Resistance to dust and dirt (no fan opening), vibration
- Great RF “front end”
- All front panel buttons programmable to many options
- 14-character front display
- Can display MDC “ID” of other radios calling

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…but there are a few downsides

- Need to use Motorola's software ($239 for 3-year license)
- Software requires a Windows 32-bit operating system (or Win 7 64-bit Professional's 32-bit emulation)
- Care needed when programming to avoid transmitting out of ham band
- Need to understand Motorola terms
  - "Code plug"
  - "Conventional personality"
  - "Zone"
  - A few others

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Your mysterious radio is part of Motorola's "Professional Series"

Professional Series radios are:

- Analog FM
- Widely used by:
  - Ambulances
  - Volunteer firefighters
  - Industrial facilities
  - Public utilities
  - Trunked radio systems
- Available in many configurations
- Perfect for ham radio (usually)

Used Motorola Professional Radios available on ebay and elsewhere; CDM-1550 discontinued by Motorola, Dec. 2015

ebay Shop by category Search...

Back to search results | Listed in category: Consumer Electronics > Radio Communication > Other Radio Communication

This is a private listing. Sign in to view your status or learn more about private listings.

Typical ebay listing: Make sure the model code is listed too

Motorola CDM 1550 VHF 136-174 MHz AAM25KKF9AA5AN

Item condition: **Seller refurbished**
"*Looks and operates as good as new.*"

Time left: 9d 17h 2/14, 6:54AM

Price: **US $209.00**

Buy It Now

Add to cart

1 watching

Add to watch list

Add to collection

Located in United States

Shipping: **$16.00** Expedited Shipping | See details
Item location: **Skidmore, Texas, United States**
Ships to: United States and many other countries | See details

Delivery: Estimated between **Sat. Feb. 6 and Wed. Feb. 10**

Payments: PayPal VISA

But, you need to determine which features are in a given "Professional" radio--be aware before you buy one…

Motorola Professional Series Product Identification Matrix

Internal Use	Radio Type	Model Series	Bandsplit	Power	Display	Channel Spacing	Protocol	Feature Level	Model Revision	Model Package
AA Internal Use	**M** Mobile	**25** Model Series	**B** 29.7-36 MHz	**H** 1-25 W	**A** No Display, No Keypad	**4** 12.5kHz	**AA** Conventional	**1** 4 Frequency	**A** Original Revision	**N** Standard Package
LA Internal Use	**H** Handheld		**C** 36-42 MHz	**K** 25-40 W	**C** No Display, Basic Keypad	**9** Programmable	**DU** LTR	**2** 64 Frequency		
			D 42-50 MHz	**D** 1-5	**D** 1 Line Display,Limited Keypad		**DP** LTR	**5** 16 (128 on AA) Frequency		
			K 136-174 MHz		**F** 1 Line Display, Standard Keypad			**6** 160 Frequency		
			M 217-222MHz		**H** 1 Line Display, Enhanced Keypad			**8** 160 Frequency		
			R 403-470 MHz		**N** 4 Line Display, Enhanced Keypad					
			S 450-512 MHz							

…for amateur use get Bandsplit K (2-meters) or R (for 440); Channel Spacing = 9; Protocol = AA; Feature Level 5 or 6

Example: Motorola CDM 1550 VHF 136-174 MHz AA M 25 K K F 9 AA 5 AN

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The same programming software also programs and shares many features with the companion handheld HT-1250/1550

Example: Motorola HT-1250 VHF 136-174 MHz AA H 25 K D F 9 AA 5 AN

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In summary, Motorola Professional radios offer lot of value and power; for DCS use, just remember our simple buttons

Programmable Buttons:

P1 Button
Short: Toggle System Scan On/Off
Long: Nuisance Delete

P2 Button
Short: Monitor
Long: Open Squelch

P3 Button
Short: Toggle Repeater/Talkaround
Long: Toggle High/Low Power

P4 Button
Short: Backlight Control
Long: Home Revert

Thanks for listening.