



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

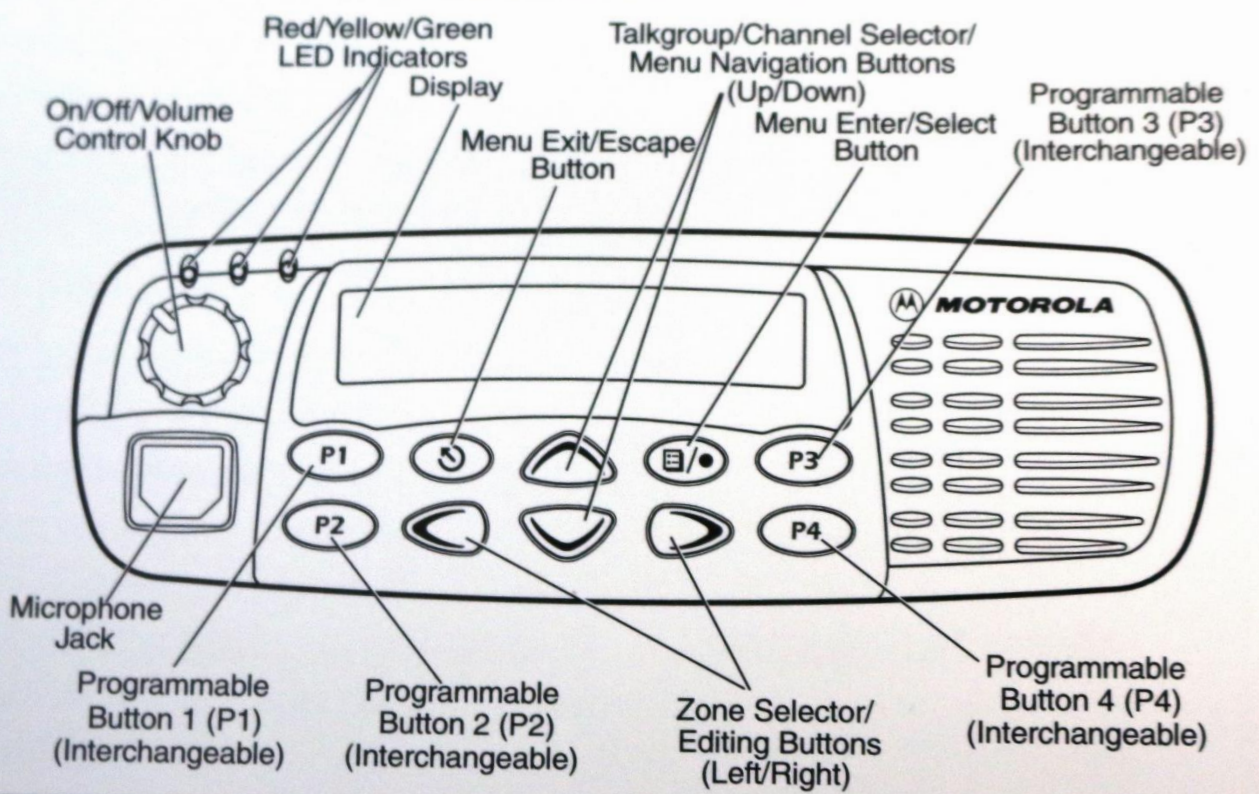




CDM1550•LS and CDM1550•LS+ Quick Reference Card

(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.



Let's review
the operation
basics

Button	Function	Short Press	Long Press	Hold Down	Page

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



CDM 1550 Buttons.txt

Programmable Buttons:

P1 Button

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

P3 Button

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

P2 Button

Short: Monitor
Long: Open Squelch

P4 Button

Short: Backlight Control
Long: Home Revert

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

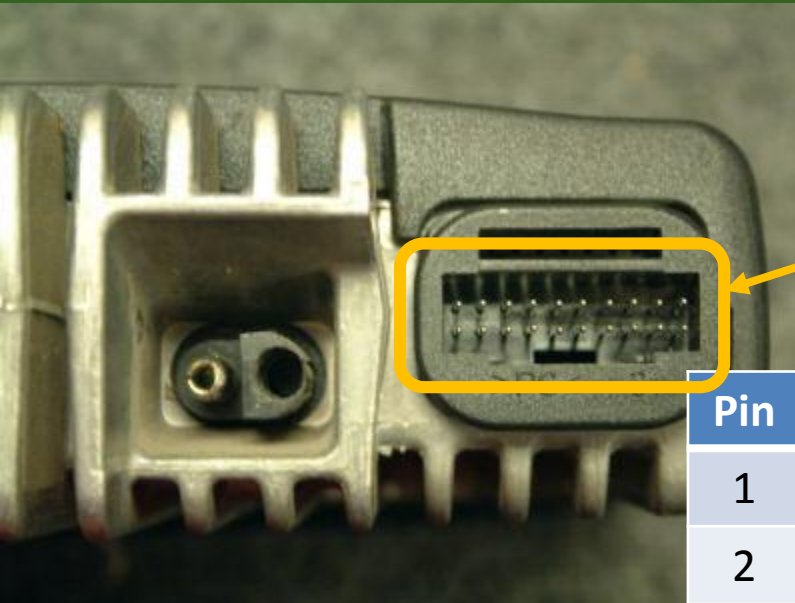


440 amateur porta-peater in use for Palos Verdes Half Marathon

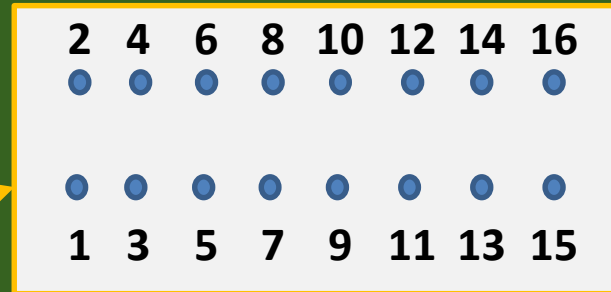
Building a portable repeater is easy with two Motorola CDM 1550s

- \$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



Radio top side



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**

These Motorola radios have many other features not found on amateur units...but some knowledge is required



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

...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)

AS TOUGH AS YOU ARE.

PR860 PORTABLE

The Motorola PR860 Professional Series two-way radio offers rugged design in a surprisingly lightweight package. It's ergonomic design handles easily, with bigger knobs and controls that can be operated even when wearing heavy gloves.

HT SERIES PORTABLES

Motorola HT Series Professional portable radios are the right choice for users with advanced communication needs. The HT Series is composed of four robust radios tailored to meet the requirements of almost any organization. They offer unrivaled, crystal-clear audio quality even in noisy surroundings, thanks to Motorola's X-Pand™ voice feature. In addition, they have all passed Motorola's grueling Accelerated Life Test which simulates five years of hard use in the field.

MTX SERIES PORTABLES

Intelligent radios so advanced, they practically think for you. MTX Series portable two-way radios are the smart choice for your business—delivering everything you need for optimal business communication. Designed to operate on Motorola's Privacy Plus™ or LTR® trunking systems, these radios can enhance your interactive resources by providing a wider calling range, faster channel access, greater privacy and higher user and talkgroup capacity.

CDM SERIES MOBILES

The CDM Series of mobile radios offer users a compact, ergonomic design with optimal mounting flexibility. These robust mobile radios are tailored to meet the requirements of almost any organization, offering crisp, clean audio even in noisy locations or vehicles, thanks to Motorola's X-Pand™ voice feature and a large front-projecting speaker. Telephone/paging capabilities and Motorola's precision-controlled MDC signaling features boost effectiveness by providing a wide range of calling options. In addition, customizable buttons can be programmed for quick access to favorite features.

PM1200 MOBILE

The PM1200 is an affordable high power, lowband radio for public works, utilities and transportation professionals. This mobile radio offers a full range of easy-to-use features including Emergency Alerts, Scanning, Quick-Call II and DTMF signaling.



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



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



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.

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 MasterCard AMERICAN EXPRESS DISCOVER

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



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			S 450-512 MHz							

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



Push to turn on/off;
Turn to adjust volume



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Thanks for listening.