

## M&S Systems DMC3-4 / DMC1 Troubleshooting Guide



### **If there is "No Power" on the unit—it will not power up:**

- Check that the circuit breaker at the electrical box is on.
- Check that the [TE5 transformer](#) is connected correctly. Refer to diagram on the transformer. (Brown to Yellow 16-18 VAC, Blue to Red 16-18 VAC)
- Check the fuses on the back of the master unit. Replace if necessary (Radio Shack Part #270-1065).
- Reset master unit by inserting a paperclip in the reset hole, which is located behind the door.

If the radio reception is poor:

*AM*

- Check that AM antenna is installed in accordance with finish out instructions, and connected to tuner module.

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**THE ORANGE ANTENNA WIRE SHOULD BE CONNECTED TO THE OUTSIDE AM CONNECTOR – THE ONE FURTHEST FROM THE FM CONNECTION.**

- Check that TE5 transformer is properly grounded.
- Check that ribbon cable from tuner to circuit board is seated properly.
- Possible defective master.

*FM*

- Check that FM antenna is installed in accordance with finish out instructions, and connected to tuner module.
- Check that ribbon cable from tuner to circuit board is seated properly.
- Possible defective master.

**If feedback occurs when initiating talk or listen:**

- Check that intercom stations are not installed back to back or in the same wall cavity.
- Check that intercom stations are not installed within 10 feet of each other.
- Check for shorts on intercom station cable runs.
- Reduce intercom volume.

**If the CD will not eject the cartridge:**

- Check that there are no room station cables or other wires routed behind the mechanism in the CD chassis.
- Make sure that the CD chassis and plastic faceplate is installed correctly.
- Check that the CD eject PCB is plugged into the mechanism.

**If intercom buttons don't function properly:**

- Check that intercom switches are not in the "OFF" position.
- Check that room station and patio connectors are terminated correctly.

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- Check for shorts or opens on intercom station cable runs.
- Check for shorts or opens on chime module and door station cable runs. (Continuous chime will lock up the master. See System Diagnostics.)
- Reset master unit by inserting a paperclip in the reset hole, which is located behind the door.
- Check that there are not a lot of excess room station cables run behind the master. Bulky wire may cause master circuit boards to compress against each other and trigger the buttons.
- Check the total length of run isn't above 350' or system over 1000' total

### **If there is no radio or intercom audio:**

- Check that room switches are not in the "OFF" or "MONITOR" position.
- Check that volume settings and controls are set properly. (See AUDIO SETTINGS)
- Make sure the "SOURCE" selection is correct.
- Check for shorts or opens on intercom station cable runs.
- Check that room station and patio connectors are terminated correctly.
- Reset master unit by inserting a paperclip in the reset hole, which is located behind the door.
- Possible defective master.

### **If the unit has hum, popping, or audible oscillation:**

- Check that room station and patio connectors are terminated correctly. (Remove room stations from the master one at a time to identify the source of the interference.)
- Check for shorts on intercom station cable runs.
- Check that cable runs are not too close to AC lines.
- Check that room stations and master are not mounted too close to electrical equipment. (i.e. TV, Cordless phones, microwave oven, etc.)

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- Check that master is on a dedicated 120 Volt 15 amp circuit breaker.
- Possible defective transformer (TE5).
- Possible defective master.

### **If there is no communication to the door:**

- Make sure to perform "DOOR TALK" correctly. (press "Listen" and "Talk" simultaneously to talk to the door. Release to listen to the door).
- Check that door speaker is connected properly at master unit and door station.
- Check for short or open on door station cable.
- Check that master is not in "off" position
- Check that intercom and master volume levels are set properly.
- Possible defective door station.
- Possible defective master.

### **If there is no chime, or continuous chime:**

- Check that the chime module (MC3 or MC8) is connected correctly to the master unit.
- Check that the bell button wires are connected to screws on back of bell button. (Bell button should be lit if connected properly to the chime module.)
- Check that room switches at master are in "RADIO INT" or "INTERCOM" position. (No chime when stations are switched to the "Monitor" or "Off" position.)
- Check that "INTERCOM VOLUME" and room station volume controls are adjusted properly. (See AUDIO SETTINGS.)
- Check for short or open on bell button wires. (Short will cause Error 9).
- Possible defective chime module.

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## **If the room station does not function properly:**

- Check that room station and patio station connectors are terminated correctly. (Make sure there are no loose or broken wires and that the correct color code was used to connect the room stations.)
- Check for shorted or open room station cable run.
- Possible defective intercom station.
- Possible defective transformer (TE5).
- Possible defective master.

For DMC 4 wire: If all else fails, try unplugging all wires EXCEPT GREEN:

- Add all RED wires one at a time, checking for Master Talk and Music
- Add all WHITE wires one at a time, checking for Listen and Talk
- Add all BLACK wires one at a time.

## **System Diagnostics:**

- To put the dmc master into "test mode," press VOLUME UP ▲ and TUNE UP ▲ simultaneously. The display will show the version number of the software (e.g "1.7") and the word "test".
- To display stored error messages press TUNE DOWN ▼ and "PRESET" simultaneously. This will display the last four error codes.
- To exit error codes, press TUNE DOWN ▼ and "PRESET" simultaneously.
- To exit "test" press VOLUME UP ▲ and TUNE UP ▲ simultaneously

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## **dmc1 Error Codes**

<b>Code</b>	<b>Description</b>	<b>Possible Causes</b>
<b>1</b>	CD Mechanism Failure	Improperly inserted or defective cable,  defective Compact Disc,  or defective mechanism
<b>2</b>	CD Mechanism Thermal Protection	Improper installation,  or defective mechanism
<b>3</b>	CD communications failure	Control cable not connected,  no power to the mechanism,  or defective mechanism
<b>4</b>	FM Tuner Frequency Lock Failure	Improper AM antenna installation,  ribbon cable not seated correctly,  defective tuner module,  <b>or defective master</b>
<b>5</b>	Room Station Control	Shorted cable run,  incorrect terminations,  defective room station  Too Long of a single or combined cable run (single 350'/comb 1000')
<b>6</b>	Patio Control	Shorted cable run,  improper termination,  defective patio station
<b>7</b>	Disc Data Error	Compact Disc dirty or damaged
<b>9</b>	Continuous Chime	Stuck bell button,  short on door station cable run,  <b>or defective chime module</b>

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# **Audio Settings**

## **Volume**

- Music—Adjusts the volume for system music
- Master Station—Adjusts the volume for the speaker on the Master Station only
- Intercom—Adjusts the volume for the system intercom

## **Tone**

- Loudness
- Treble
- Bass
- Balance (if you have the optional stereo power amplifier)

<b>Function</b>	<b>Recommended Setting from Software VER 1.7 and 1.9</b>
Master Volume	10
Loudness	On
Treble	10
Bass	8
Balance (optional mc960PA only)	0
Intercom Volume	10

  

<b>Function</b>	<b>Recommended Setting from Software VER 2.4 and later</b>
Master Volume	25
Loudness	On
Treble	10
Bass	8
Balance (optional mc960PA only)	0
Intercom Volume	25

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# Useful Information

## DMC 1 Wire Functions

### CAT5 – Retrofit Wire Conversion Chart

CAT5	FUNCTION	M&S	M&S	NUTONE	RITTENHOUSE	RITTENHOUSE
		MS7	MS6	IW6	8 CONDUCTOR	7200
ORANGE	IC INPUT	BLUE	BLUE	ORANGE	GREEN	GREEN
ORANGE/WHITE	IC INPUT	YELLOW	YELLOW	ORANGE/WHITE	YELLOW	YELLOW
BLUE	ROOM/PATIO A/D	RED	RED	BLACK	RED	BLUE
GREEN/WHITE	RELAY CONTROL	BLACK	BLACK	BLACK/WHITE	BLACK	BLACK
BLUE/WHITE & BROWN	GROUND	WHITE	WHITE	RED/WHITE	WHITE	WHITE
BROWN/WHITE & GREEN	AUDIO	GREEN	GREEN	RED	BLUE	BROWN
	<b>NOT USED</b>	VIOLET			ORANGE	
	<b>NOT USED</b>				GREY	

### 45 Ω Polarity Chart

FOR MONO SPEAKERS ON dmc1 MASTER UNIT

Polarity	CAT5	45 Ω SPEAKER	MVC1
<b>Positive +</b>	Green and Brown/White	Red	Violet
<b>Negative -</b>	Brown and Blue/White	Black	Blue

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## 45 Ω Polarity Chart

FOR STEREO SPEAKERS ON MC960PA

Polarity	SVC96	45 Ω Speaker	MS2SXSC	MS5XSC
Left +	Green	Red	Violet	Green
Right +	Violet	Red	Violet	Violet
Negative -	White	Black	Blue	White

## DMC 3-4 Wiring

Black	Relay
Red	Common
White	Audio Out
Green	Audio In

## 4 Wire Troubleshooting

Remove patio black and see if intercom can speak to master

THIS TROUBLESHOOTING INFORMATION IS ONLY FOR A 4-WIRE SYSTEM

TEST FROM MASTER ONLY

### 1st. STEP

Remove "PATIO BLACK" Wire

Test Communication From Master Out To Your Room/Patio Stations.

If Room Stations Still Can Not Hear You Or Can Barely Hear You, Do Not Add The Patio Black Wire Back Just Yet Just Set It Aside.

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## 2nd STEP

There Will Be A Large Lifted Screw Terminal Labeled “BLACK” Remove ALL The Wires From That Screw Terminal, Then Test Communication Again.

**\*\* IF YOU ARE NOW ABLE TO TALK OUT OF THE MASTER UNIT**

Put All BLACK Wires Back ONE At A Time (Test Communication Every Time You Add A Black Wire) Until You Find The One That Is Locking Up Your System Or Causing The Volume To Drop.

**\*\*\* REMEMBER** After Testing A Wire And If It Works Do Not Remove The Wire Keep It Under The Large Lifted Screw Terminal And Add In Another Wire To It, We Need To Put A Load On The System.

**\*\* IF YOU ARE STILL NOT ABLE TO TALK OUT OF MASTER**

Then Keep All BLACK Wires Removed And Now Remove All The WHITE Wires, Then Test Communication Again.

If At The Point You Are Able To Talk Out To The Room Stations At A Normal Volume Then Go Ahead And Put All Your BLACK Wires Back, Then Test Communication Once Again.

If You Can Still Communicate Put All WHITE Wires Back ONE At A Time (Test Communication Every Time You Add A White Wire) Until You Find The One That Is Locking Up Your System Or Causing The Volume To Drop.

**\*\*\* REMEMBER** After Testing A Wire And If It Works Do Not Remove The Wire Keep It Under The Large Lifted Screw Terminal And Add In Another Wire To It, We Need To Put A Load On The System.

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