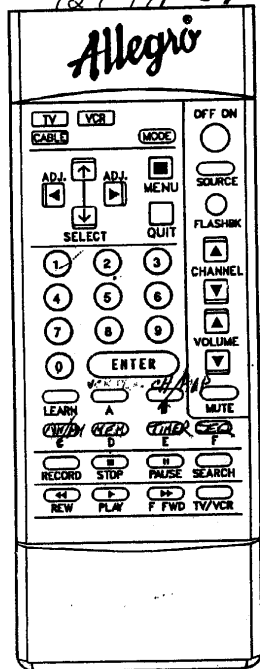


MBC400P MULTI-BRAND REMOTE CONTROL

124-191-07B



INTRODUCTION

The MBC400P Multi-Brand Remote Control allows you to operate most models of remote-controlled TVs, VCRs and cable-TV decoders made since 1981, even if they are all different brands. In this way, your new remote control can take the place of the several remote controls previously needed.

FEATURES

Simple Set-Up. Before use, the remote must be programmed for the brands of TV, VCR and cable-TV decoder it will be used to operate.

Easy Operation. Once programmed, the remote is as simple to use as an ordinary remote control.

Long Range Operation. This remote can be used over a distance longer than double the normal room size.

Versatile Operation. CABLE mode can be programmed to operate a second TV or second VCR, if desired.

OPERATIONAL NOTES

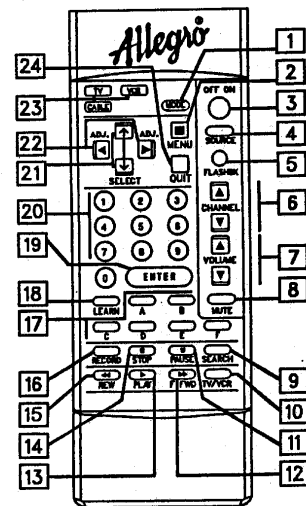
1. Some controls on the remote, such as PLAY and VOLUME, always operate the VCR or TV. Whether other controls will operate the VCR, cable-TV decoder or TV depends on the selected operation mode: VCR, CABLE or TV.
2. Some of the functions provided by this remote may not be part of the remote control system for your equipment. Refer to the owner's manuals supplied with your TV, cable-TV decoder and VCR to see which functions are available for use.
3. The remote control supplied with your TV, VCR or cable-TV decoder may have controls which are not duplicated on this remote. If the functions provided by those controls are desired, the original remote control will have to be used.

4. Some controls on this remote may have different names than those on the original remote control. A few examples are shown below:

Original Name	Provided Name
Recall	ENTER
Power	OFF-ON
A/CH	FLASHBK

5. People who subscribe to cable-TV most often use their cable-TV decoder to select channels. If your television set is connected to a cable-TV system, channel selection will be easiest when this remote is operating in the CABLE mode.

CONTROLS AND OPERATION



The following descriptions are keyed to the drawing above.

1. MODE

Press repeatedly to select the TV, VCR or CABLE operating mode for the remote.

2. MENU

VCR Operation: Displays the on-screen menus on some VCRs.

CABLE Operation: Function depends on type of cable-TV system.

TV Operation: Displays the on-screen menus on some TVs.

3. OFF/ON

Turns equipment OFF and ON corresponding to the TV, VCR or CABLE operating MODE of the remote.

4. SOURCE

Cable Operation: Function depends on type of cable-TV system.

TV Operation: Selects different audio/video sources on some TVs.

5. FLASHBK (Flashback)

TV Operation: Used to return to the last TV channel you were watching.

VCR Operation: Press during VCR playback to view the channel tuned by the VCR.

6. ▲ CHANNEL ▼

Selects channels that are higher (▲ CHANNEL) or lower (▼ CHANNEL) than the channel currently selected. Channels are selected at the equipment corresponding to the TV, VCR or CABLE operating MODE of the remote.

7. ▲ VOLUME ▼

Changes the volume of the TV; ▲ increases and ▼ decreases volume.

8. MUTE

Turns off TV sound while the picture remains. Press MUTE again to restore the sound.

9. SEARCH

Activates the Index Search Search features on some TVs.

10. TV/VCR

Selects the source of the signal on the TV. Switches the TV to TV mode and VCR mode. TV Mode: Channels are selected through the TV.

VCR Mode: Channels or are selected through the VCR.

11. PAUSE

Stops VCR tape playing. Press again to resume tape playback.

Stops VCR tape recording. Press again to resume recording.

PAUSE again to resume recording.

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PAUSE again to resume recording.

PAUSE again to resume recording.

PAUSE again to resume recording.

9. SEARCH

Activates the Index Search and Blank Search features on some VCRs.

10. TV/VCR

Selects the source of the programs seen on the TV. Switches the VCR between TV mode and VCR mode.

TV Mode: Channels are selected through the TV.

VCR Mode: Channels or tape operations are selected through the VCR.

11. PAUSE

Stops VCR tape playing temporarily for "still" picture viewing. Press PAUSE again to resume tape playing.

Stops VCR tape recording to avoid recording unwanted material. Press PAUSE again to resume recording.

12. F FWD (Fast Forward)

Advances a VCR tape rapidly to a forward position (without picture and sound) when used while tape is stopped. Advances tape quickly (with picture shown) when used while tape is playing.

13. PLAY

Begins VCR tape playback.

14. STOP

Stops recording or playback of a VCR tape.

15. REW (Rewind)

Rewinds a VCR tape rapidly when used while tape is stopped.

16. RECORD

Starts recording on a VCR tape. Press and hold RECORD until the "Recording" indicator on the VCR lights. Recording begins.

17. A, B, C, D, E and F

Function depends on brand and type of TV, VCR or cable-TV system.

18. LEARN

Used with the numbered buttons to program remote for product brand code.

19. ENTER

VCR Operation: Displays channel number, time and the VCR mode on some VCRs. Press ENTER again to remove any on-screen display.

TV Operation: Displays channel number and the time on some TVs.

CABLE Operation: Function depends on equipment to be operated.

20. Numbered Buttons

Selects channels, programs the remote, and programs the VCR timer. May be used to enter Index, Go-To destination and other information on some VCRs.

NOTE: If you are entering 2- or 3-digit numbers, press the respective buttons within two seconds of each other.

21. SELECT

TV Operation: Sequences through the on-screen menu options on some TVs.

VCR Operation: Erases the pre-set timer information for the program selected on some VCRs while programming the timer. Resets the Elapsed-Time Counter on some VCRs.

CABLE Operation: Function depends on type of cable-TV system.

22. ◀ ADJUST ▶

TV Operation: Adjusts and/or selects the on-screen menu option chosen with the SELECT button on some TVs.

VCR Operation: ◀ ADJUST corrects tracking during tape playback on some VCRs. ADJUST may be used to select either Standard Play (SP) or Extended Play (EP) recording speed on some VCRs.

23. Mode Indicators

Show selected operating mode (TV, VCR and CABLE) of the remote.

24. QUIT

Press to remove any on-screen menu or display for some VCRs.

PREPARATION FOR USE

Before this remote is programmed or used, you must install batteries. Batteries are not included because of their limited shelf life. Fresh batteries should be used for dependable operation. Refer to "Installing Batteries" on the other side of this operating guide for information.

WARNING

This equipment generates and uses radio frequency energy. If not used properly, it may cause interference to radio and TV signals. It has been type tested and found to comply with the FCC limits for a Class B computing device, which require reasonable protection against such interference. However, there is no guarantee that interference will not occur. If this equipment does cause interference to radio or TV reception, try the following: Reorient the receiving antenna. Move the remote control further away from the receiver. If necessary, consult your dealer or an experienced radio/television technician for additional suggestions.

LIMITED WARRANTY

If this product should prove defective in workmanship or material and is returned to the selling dealer within 90 days from the date of original purchase at retail, it will be repaired or replaced at Zenith's option, without charge. **DAMAGE CAUSED BY ACCIDENT, MISUSE, ABUSE OR NEGLIGENCE IS NOT COVERED BY THIS WARRANTY.**

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

If you have any problem in obtaining satisfactory warranty performance,

write: Customer Service Department
Zenith Electronics Corporation
1900 N. Austin Avenue
Chicago, Illinois 60639
or call: (312) 745-5152
Mon-Fri, 8:00 a.m. - 4:30 p.m.
Central Time

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Glenview, Illinois 60025
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INSTALLING BATTERIES

When the effective operating range of the remote control becomes noticeably shorter, replace the batteries with (2) high quality, alkaline, size AAA batteries. Do the following steps.

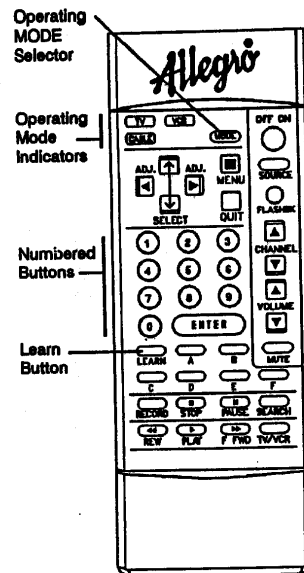
1. Remove the battery compartment cover by **PUSHING DOWN** on tab and **PULLING OUT** from top.
2. Insert new batteries as indicated in the diagram inside the compartment. Observe proper battery polarity.
3. Replace the cover by inserting the tab on the bottom of the cover into its housing. Snap the cover into position.

4. After installing new batteries, the remote control resets to Zenith brand codes, as follows: TV = 101, VCR = 201 and CABLE = 301.
If you are going to operate equipment that uses different brand codes, the remote must be programmed for those codes. Refer to "Programming the Remote to Operate Your VCR, Cable-TV Decoder and TV" for information.

CAUTIONS:

- Do not place heavy objects on top of the remote control buttons. Prolonged accidental operation of the remote control will shorten battery life.
- If you are not going to use the remote control for a month or more, remove the batteries. Battery leakage may damage the remote control.

PROGRAMMING THE REMOTE TO OPERATE YOUR VCR, CABLE-TV DECODER AND TV



Before using your new Multi-Brand Remote Control, it must be programmed to recognize the brands of the VCR, cable-TV decoder and TV it will be used to operate. Do the following steps.

1. Find the code that corresponds to each brand and type of equipment you are going to operate. Refer to Tables 1, 2 and 3. For example, if you were programming the remote for use with a Zenith TV, you would look up "Zenith" in "Table 1," and find code "101."

Write the brand codes for your equipment on the following lines. Keep this operating guide for future reference.

TV CODE: _____

CABLE CODE: _____

VCR CODE: _____

2. Press **MODE** repeatedly to select the desired TV, VCR or CABLE operating mode for the remote.
3. Press **LEARN** for about 5 seconds until the **MODE** indicator lights for the selected TV, VCR or CABLE mode of operation.
4. Enter the proper brand code number determined in Step 1.
5. Press **LEARN**. All three mode indicators should light briefly, then turn off to indicate the brand code has been programmed.
6. If all three mode indicators fail to light briefly, an error has occurred. Repeat Steps 2-5 to try again.
7. Repeat Steps 2 - 5 to program the remote for the other equipment you are using.

NOTE: CABLE mode can be programmed to operate a second TV or second VCR, if desired.

Table 1. TV Codes

TV Brand Name	Code	TV B
Admiral	116	Mont
Admiral	121	Mont
Akal	104	Mont
Anast	103	NEC
AOC	104	NEC
Bell & Howell	121	Pana
Centurion	119	Pana
Coronado	103	Philco
Curtis Mathes	116	Philco
Curtis Mathes	119	Philco
Curtis Mathes	121	Philip
Daytron	119	Philp
Emerson	103	Pioni
Emerson	104	Port
Emerson	123	Quas
Emerson	124	Quas
Emerson	131	Real
Emerson	136	Real
Fisher	109	Real
Fisher	118	RC
General Electric	106	RC
General Electric	107	RC
General Electric	114	Sany
Goldstar	116	Sany
Goldstar	103	Sany
Goldstar	104	Sany
Hitachi	119	Sany
Hitachi	102	Sany
Hitachi	103	Sany
Hitachi	129	Scor
JVC	125	Scor
JVC	132	Seai
J.C. Penney	104	Seai
J.C. Penney	110	Seai
J.C. Penney	114	Seai
J.C. Penney	119	Seai
KMC	103	Seai
KTV	103	Sha
KTV	104	Sha
Lodgeset	121	Sha
Logik	121	Sha
LXI	133	Sha
LXI	137	Sor
Magnavox	103	Sy
Magnavox	112	Sy
Magnavox	113	Sy
Magnavox	119	Sy
Magnavox	127	Sy
Magnavox	128	Sy
Majestic	121	Tel
Marantz	104	Tel
Marantz	120	Tel
Memorex	121	Tel
MGA/Mitsubishi	104	Tel
MGA/Mitsubishi	119	Tel
MGA/Mitsubishi	120	Tel
MGA/Mitsubishi	130	To
Montgomery Ward	103	To
Montgomery Ward	105	Yc
Montgomery Ward	113	Zz
Montgomery Ward	114	Zz

Table 1. TV Codes by Brand

TV Brand Name	Code	TV Brand Name	Code
Admiral	116	Montgomery Ward	119
Admiral	121	Montgomery Ward	121
Akai	104	Montgomery Ward	130
Amart	103	NEC	104
AOC	104	NEC	119
Bell & Howell	121	Panasonic	106
Centurion	119	Panasonic	107
Coronado	103	Philco	103
Curtis Mathes	116	Philco	104
Curtis Mathes	119	Philco	113
Curtis Mathes	121	Philips	112
Daytron	119	Philips	113
Emerson	103	Pioneer	135
Emerson	104	Portland	103
Emerson	123	Quasar	106
Emerson	124	Quasar	107
Emerson	131	Realistic	105
Emerson	136	Realistic	123
Fisher	109	Realistic	124
Fisher	118	RCA	104
General Electric	106	RCA	116
General Electric	107	RCA	126
General Electric	114	Sampo	119
General Electric	116	Samsung	103
Goldstar	103	Samsung	119
Goldstar	104	Samsung	134
Goldstar	119	Sanyo	108
Hitachi	102	Sanyo	109
Hitachi	103	Sanyo	118
Hitachi	129	Scott	119
JVC	125	Sears	103
JVC	132	Sears	108
J.C. Penney	104	Sears	109
J.C. Penney	110	Sears	110
J.C. Penney	114	Sears	111
J.C. Penney	119	Sears	118
KMC	103	Sears	134
KTV	103	Sharp	103
KTV	104	Sharp	105
Lodgenet	121	Sharp	122
Logik	121	Sharp	133
LXI	133	Sharp	137
LXI	137	Sony	115
Magnavox	103	Sylvania	112
Magnavox	112	Sylvania	113
Magnavox	113	Sylvania	117
Magnavox	119	Sylvania	119
Magnavox	127	Sylvania	127
Magnavox	128	Sylvania	128
Majestic	121	Tatung	106
Marantz	104	Teknika	103
Marantz	120	Teknika	112
Memorex	121	Teknika	121
MGA/Mitsubishi	104	Teknika	124
MGA/Mitsubishi	119	Telerent	103
MGA/Mitsubishi	120	Telerent	121
MGA/Mitsubishi	130	Toshiba	110
Montgomery Ward	103	Toshiba	111
Montgomery Ward	104	Toshiba	134
Montgomery Ward	105	Yorx	119
Montgomery Ward	113	Zenith	101
Montgomery Ward	114		

Table 2. VCR Codes by Brand

VCR Brand Name	Code	VCR Brand Name	Code
Akai	223	Philco	214
Audio Dynamics	202	Philips	214
Audio Dynamics	218	Philips	227
Brokasonic	221	Pioneer	210
Canon	214	Pioneer	215
Citizen	209	Pioneer Laser Disk	228
Craig	212	Quasar	214
Curtis Mathes	214	RCA	215
Curtis Mathes	216	RCA	216
DBX	202	RCA	220
DBX	218	RCA	227
Emerson	203	Realistic	206
Emerson	221	Realistic	208
Emerson	223	Realistic	212
Emerson	226	Realistic	214
Emerson	233	Realistic	231
Emerson	235	Samsung	220
Fisher	211	Samsung	230
Fisher	212	Sanyo	206
Fisher	213	Sanyo	212
Funai	231	Scott	204
General Electric	214	Scott	205
General Electric	216	Scott	233
General Electric	220	Sears	206
Goldstar	209	Sears	209
Hitachi	215	Sears	211
Instant Replay	214	Sears	212
Instant Replay	227	Sears	215
JVC	202	Sharp	208
JVC	225	Sony VHS	232
J.C. Penney	214	Sony Video 8	217
J.C. Penney	218	Sylvania	207
J.C. Penney	227	Sylvania	214
Kenwood	202	Sylvania	227
Magnavox	207	Symphonic	231
Magnavox	214	Tashiko	209
Marantz	207	Tatung	202
Marantz	218	Teac	202
Marta	209	Teac	231
Memorex	212	Teknika	234
Memorex	214	Toshiba	205
MGA/Mitsubishi	204	Toshiba	215
MGA/Mitsubishi	222	Vector Research	204
Montgomery Ward	208	Vector Research	218
Montgomery Ward	214	Yamaha	202
Montgomery Ward	219	Yamaha	218
NEC	202	Zenith VHS	201
NEC	218	Zenith VHS	224
Panasonic	214	Zenith VHS	229
Pentax	215		

Table 3. Cable Decoder Codes by Brand

Cable Decoder Brand Name	Code	Cable Decoder Brand Name	Code
Drake Satellite	312	Paragon (Zenith)	333
Drake Satellite	330	Pioneer	315
Gemini	305	Regency	329
Gemini	331	Samsung	335
General Instrument	305	Scientific Atlanta	316
General Instrument	306	Scientific Atlanta	323
Hamlin	302	Scientific Atlanta	336
Hamlin	303	Sprucer (Panasonic)	313
Jerrold	304	Standard	
Jerrold	307	Components	335
Jerrold	308	STS Satellite	324
Jerrold	309	Telecaption 4000	325
Jerrold	310	Tocom	317
Kale Vision	335	Tocom VIP	318
Macom	314	Toshiba	322
Macom	321	Toshiba Satellite	319
Macom Satellite	322	Zenith	301
Magnavox	334	Zenith	322
NSC	335	Zenith AV3000	327
Oak	311	Zenith Satellite	312
Oak	332	Zenith Satellite	330
Panasonic	313	Zenith Satellite	328
Panasonic	320	Zenith Laser Disk	326