



# HUB-MP3

## Hard Disk Player System For Your Wallbox Selectors



### Wallbox Models Verified

- AMI            W-40 W-80 W-120  
                  WQ-200
- Rock-Ola    1555 1558 500
- Rowe        WRA WRB WRC
- Seeburg     3W1 3W100 3WA  
                  SC1-4 SCH1-4
- Wurlitzer    3020 5207 5210  
                  5220 5225 5250



The Model HUB-MP3 is a standalone MP3 disk drive player for your wallbox selectors. The basic system is supplied with a 4port wallbox hub and the MP3-DSP digital music player. Additional hubs can be connected to increase wallbox capacity. A maximum nine hub system will support 36 wallbox selectors. Wallboxes can be mixed or be of the same model type. Each wallbox can be individually programmed to play from any group of songs or audio files. You can arrange your wallbox music by era, special occasions or style. Maybe a wallbox that plays audio files of old-time radio shows and historical events.

The MP3-DSP works with any 44-pin ATA/IDE 2.5 inch hard disk drive 2GB and up having a maximum height of 9.5mm. Uses the FAT32 file system with long or short file name support. Other features include auto master/slave detect and power down. The MP3 player supports all layer-III encodings using fixed or variable bit-rates up to and including 320 kB/s.



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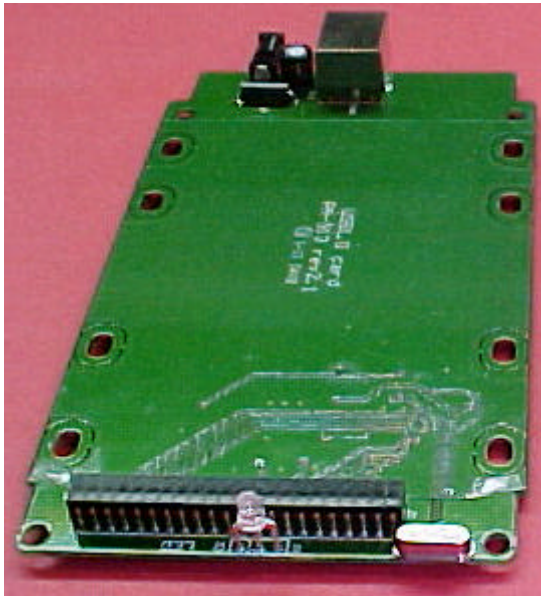
# HUB-MP3 Contents

**The hard disk drive is NOT included.**

The HUB-MP3 will work with any notebook or laptop 44-pin ATA/IDE 2.5 inch hard disk drive from 2GB and up having a maximum height of 9.5mm.

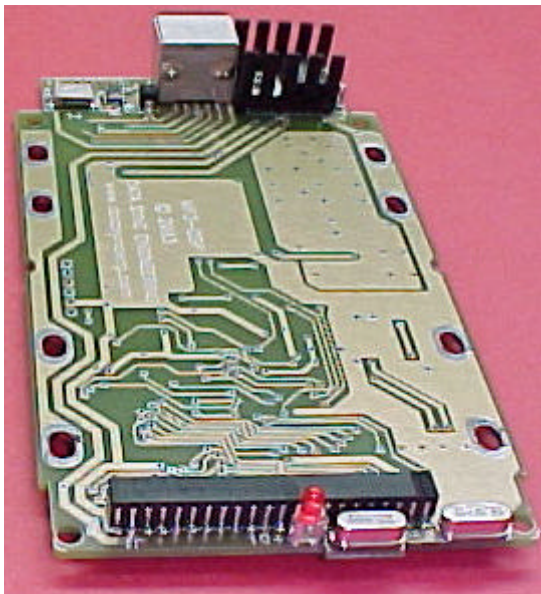


Your HUB-MP3 comes with a USB external HDD circuit board, MP3-DSP digital music player circuit board, Wallbox Hub, Connector cables, enclosure, power supply, PC software and a storage pouch.



This is your USB external HDD circuit board. When assembled with your disk drive and plugged into the USB port, it will add a drive letter to your computer and allow you to store MP3 files onto your disk drive. It can also be used as a portable disk drive to store all your computer files.

Using Windows Explorer, you would create new folders for your disc numbers then drag & drop MP3 files for each song number.



This is your MP3 digital subsystem player circuit board. When assembled with your disk drive, you have a complete music player system.

The HUB-MP3 provides CD changer emulation of 100 discs, with each having a maximum of up to 100 tracks.

# Assembling The Hard Disk Drive



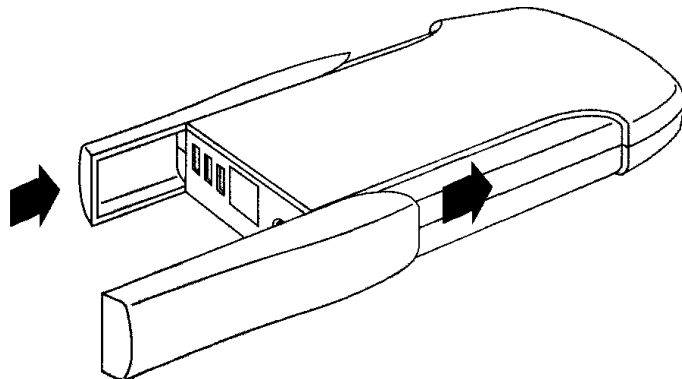
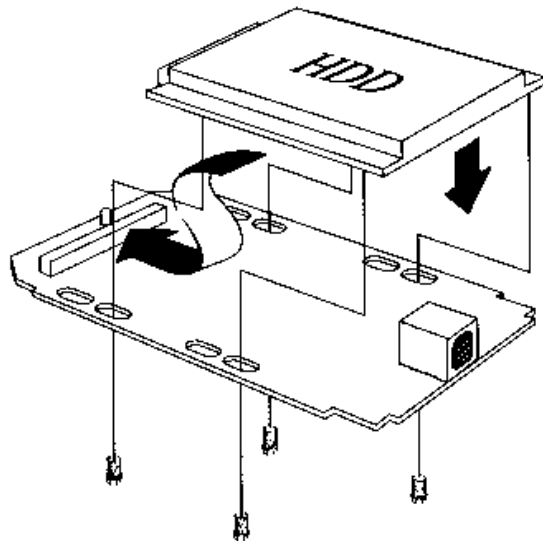
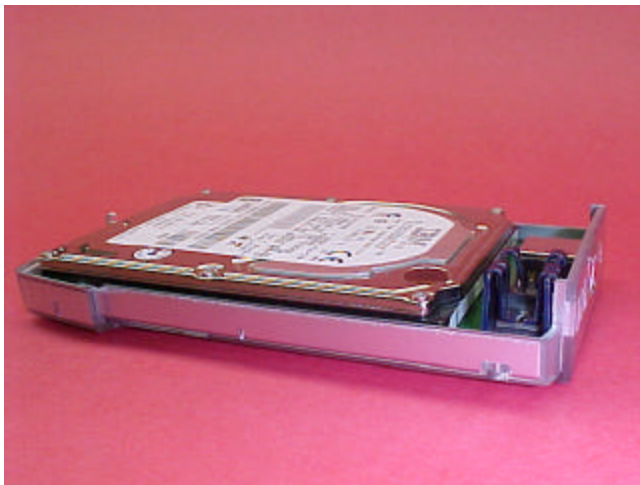
The hard disk drive has two sets of connector pins. 43-pins on the left side and 4-pins on the right.



Position the disk drive onto the circuit board then align the left side pins with the connector.



Slide the disk drive forward into the connector. The 4-pins on the right are not used.



## Folders / Discs

The MP3-DSP does not play MP3 files from the root directory. Instead, folders are used to identify disc positions.

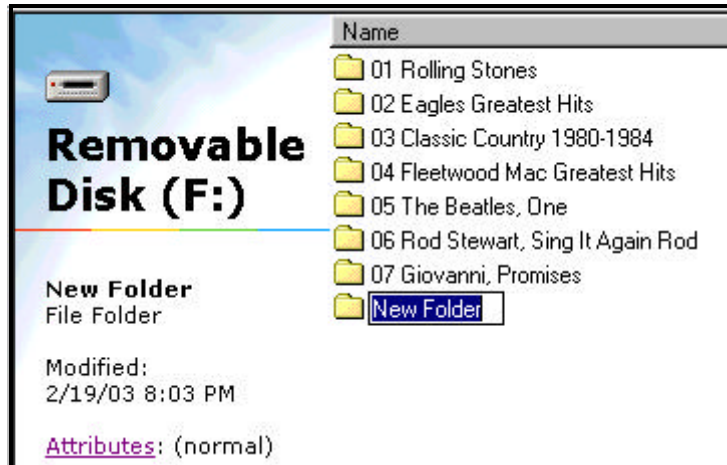
The player has a capacity of up to 100 folders. The first two letters of each folder name must be numbered to identify the position. Valid numbers are 01 to 99 and 00 for position 100.

To create a new folder ...

Single click the drive letter,  
Click **File | New**  
Then click on **Folder**

A **New Folder** name should appear.

Change the name ...



## Files / Tracks



If you need to change or add the track position number of a file, place the mouse over the file name then right click and select **Rename**.

Position your mouse to the start of the file name then left click. You should see a blinking cursor waiting for you to edit.

As with folder names, the MP3 file names must also be numbered to identify their track position. Most CD to MP3 “rippers” or “extractors” will provide this track numbering feature for you.

The player has a capacity of up to 100 files per folder. The first two letters of each filename must be numbered to identify the position. Valid numbers are 01 to 99 and 00 for position 100.

After creating your song disk, you should clean up your disk drive to eliminate excessive seeking. Click **Start | Programs | Accessories | System Tools | Disk Defragmenter**

# Initializing The Wallbox Hub

Whenever the HUB-MP3 system is powered up, the player searches for wallbox setup filenames then transmits the filename data to the attached hubs. The 4 wallbox ports on each hub need to be initialized before they will operate. It is not necessary to have all of the wallboxes connected. The first two characters of the text filename must begin with 'WS' followed by the hub unit number, wallbox port number, wallbox type and optionally the starting folder (disc) number and the file (track) number offset. You can create text filenames using Notepad. It doesn't matter what you type in for the text, only the filename is used.

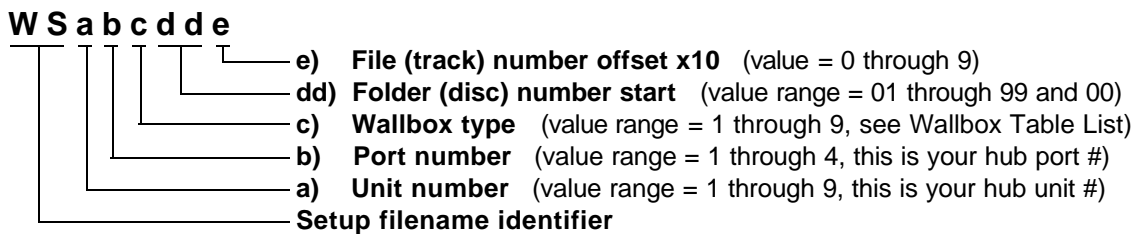
To create this text file

Click **Start | Programs | Accessories | Notepad**

Then click **File | Save As...**

Type in the setup filename (WS#####), select any of the disc folders then click **Save**

## Filename description



For letter/number type wallboxes, the letter keys will select the folder or disc number and the number key selects the file or track number. For page/button wallboxes, the page selects the folder or disc number and the button selects the file or track number. Button only wallboxes will select a file or track number using a fixed folder or disc number.

Here is an example of 4 different wallboxes each with different songs ...

	Start Disc #	Track Offset
Port 1 – Wurlitzer 5220 (200 select, Letters A to V, Numbers 1 to 0)	01	0
Port 2 – AMI W-120 (120 select, 6 Pages, 20 Buttons)	21	0
Port 3 – Seeburg SC1 (160 select, Letters A to V, Numbers 1 to 8)	01	1
Port 4 – Wurlitzer 3020 (24 select, 24 Buttons only)	27	0

The text filenames will be:

**WS112010.TXT**  
**WS126210.TXT**  
**WS131011.TXT**  
**WS149270.TXT**

Wurlitzer 5220 Letters A to V will select discs 1 to 20 and Numbers 1 to 0 will select tracks 1 to 10.  
AMI W-120 6 Pages will select discs 21 to 26 and 20 Buttons will select tracks 1 to 20.  
Seeburg SC1 Letters A to V will select discs 1 to 20 and Numbers 1 to 8 will select tracks 11 to 18.  
Wurlitzer 3020 24 Buttons will select tracks 1 to 24 on disc number 27.

As you can see, we took a different approach to the Seeburg SC1. Instead of assigning an additional 20 discs to Letters A to V, we added a 10 track offset to the original selection giving us tracks 11 to 18.

If the offset was 2, then 20 would be added to the final track, if 3 then 30 on up to 9 for 90. Using the 'Start Disc' and 'Track Offset' method allows each of the 36 wallboxes to have their very own song selections.



The WS800 hub allows you to connect 4 wallboxes to your MP3-DSP player. Up to 9 hubs can be daisy-chained together providing support for up to 36 wallboxes.

Each hub is identified as a unit number from 1 to 9. Similar unit numbers cannot be used together. The front panel of the hub has an LED indicator. A few moments after power is applied, the LED will blink, then turn on. After receiving the setup data, the LED will turn off indicating the hub is ready.

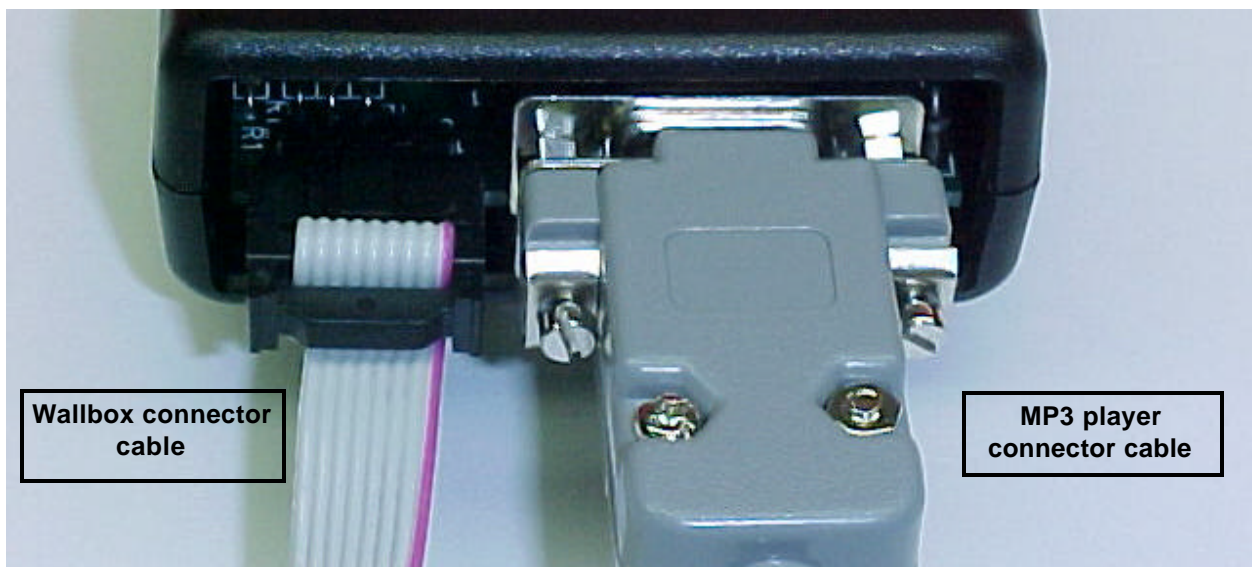
### The Cancel Button

Two wires (orange and white) from the digital interface connector can be attached to a remote push-button switch and used to cancel the current song play at any time.

## Connecting Up Your Wallbox Hub

The hub has 2 connectors as shown below. The wallbox connector cable (on the left) has an 8 conductor ribbon cable with a red tracer on wire #1. This connector is inserted with the red tracer facing toward the right. The connector on the right interfaces to the MP3-DSP player.

The hub supports up to 4 wallboxes. It is not necessary to have all the wallboxes connected. Each wallbox input uses 2 wires. Wallbox #1 are the first 2 wires, which begin with the red tracer, the next 2 wires are wallbox input #2, the next 2 for wallbox #3 and the last 2 wires are for wallbox #4.





## Assembling the MP3-DSP Player

Attach your disk drive to the MP3-DSP digital music player board. Apply the adhesive foam pad to the top half of the enclosure, above the DIN connector. Assemble enclosure. Plug in the 9-pin mini DIN connector (arrow or notch facing up).

### CAUTION

Do not attempt to hook up a wallbox power supply if you are not familiar with electrical wiring, consult with a qualified person or an electrician. Do not leave any wires exposed, always use wire-nuts or electrical tape on all connections. Improper wiring can result in a fire or shock hazard.

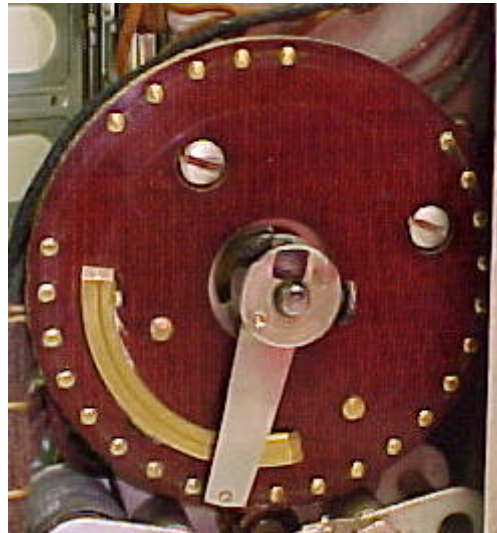
WALLBOX TABLE LIST	
Code	Wallbox Type
1	Seeburg Consolette, SC1 through SC4 and SCH1 through SCH4 (160)
2	Rock-Ola 500 & 1558 (160), Rock-Ola 1555 (200), Wurlitzer 5210 & 5220 (200)
3	Seeburg Wall-O-Matic 3W1 & 3W100 (100)
4	Seeburg Wall-O-Matic 3WA (200), Wurlitzer 5250 (200)
5	Rowe WRA & WRB (200)
6	AMI W-40 (40) & W-80 (80) & W-120 (120) & WQ-200 (200)
7	Wurlitzer 5207 (104)
8	Wurlitzer 5225 (100)
9	Wurlitzer 3020 (24)

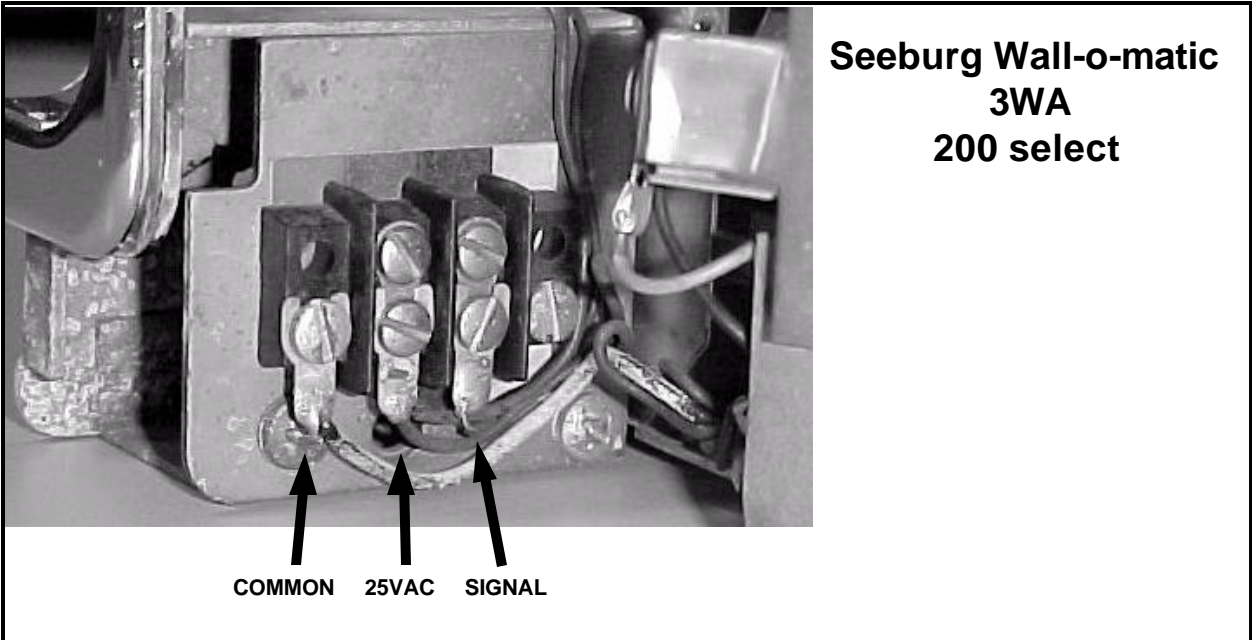
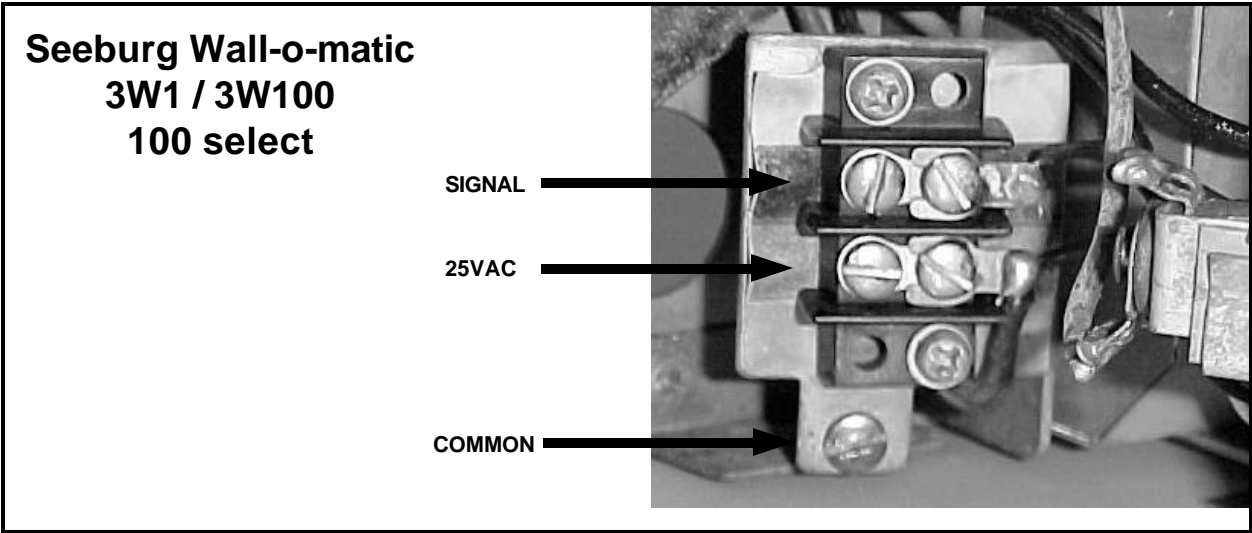
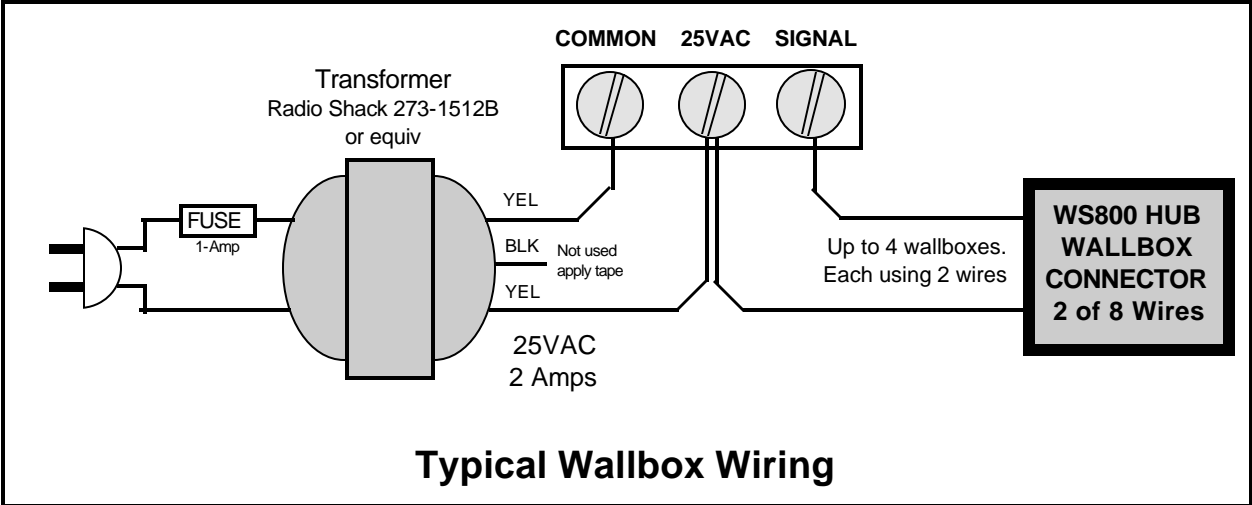
### TECH NOTE

Electrical pulses transmitted by the wallbox are generated by a contact arm rotating on a selector disc containing contact points. When these contacts become gummed up and corroded, the wallbox may not make the proper selection.

Occasionally, these contacts require cleaning. They can be cleaned with a cloth saturated with isopropyl alcohol. Do not use emery cloth or sandpaper as this may remove the plating.

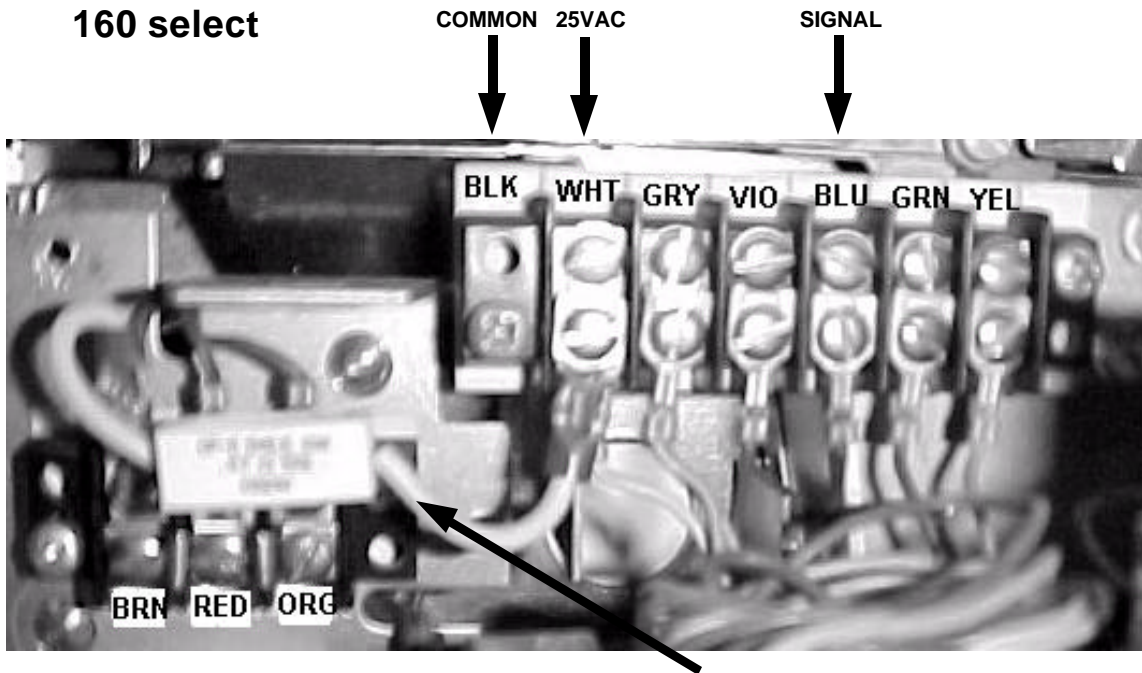
On really worn wallboxes, where basic cleaning doesn't seem to cure the problem, you may have successful results by using a low abrasive polish, such as "Scratch Out" or "Brasso". This will make the contact surfaces shiny and smooth.







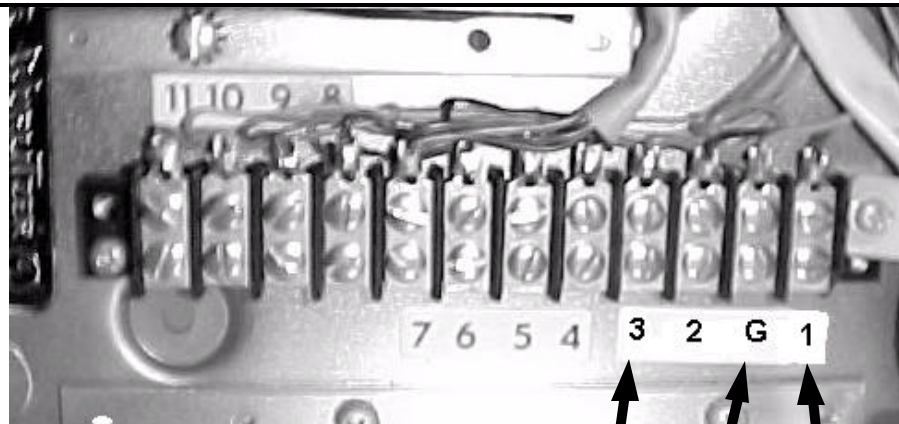
**Seeburg Consolette  
SC1-4 / SCH1-4  
160 select**



To enable coin operation, the BRN / RED / ORG terminals must be shorted together and a 10 to 20 ohm, 5 watt resistor must be inserted from the 25VAC terminal to these terminals.

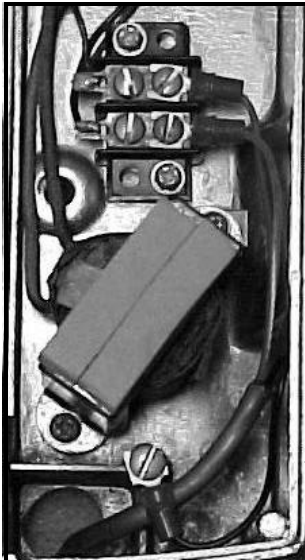
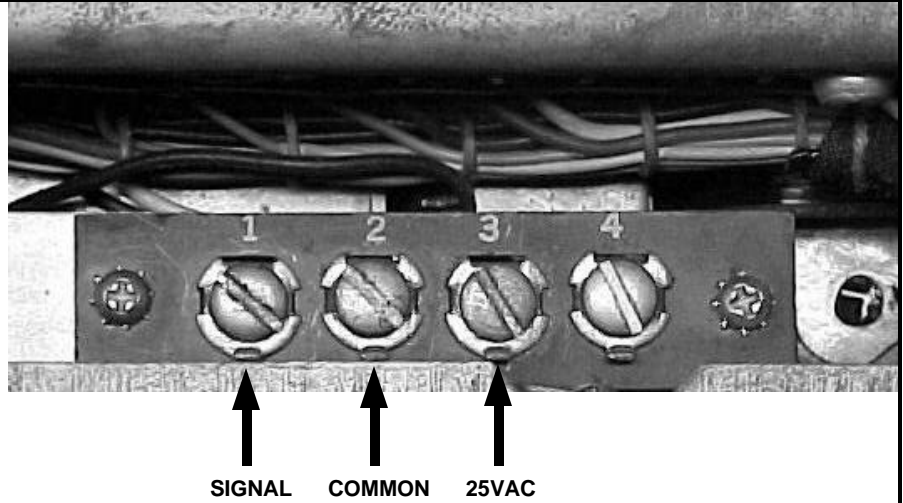
**Wurlitzer 5220  
200 select**

**Wurlitzer 5225  
100 select**



25VAC COMMON SIGNAL

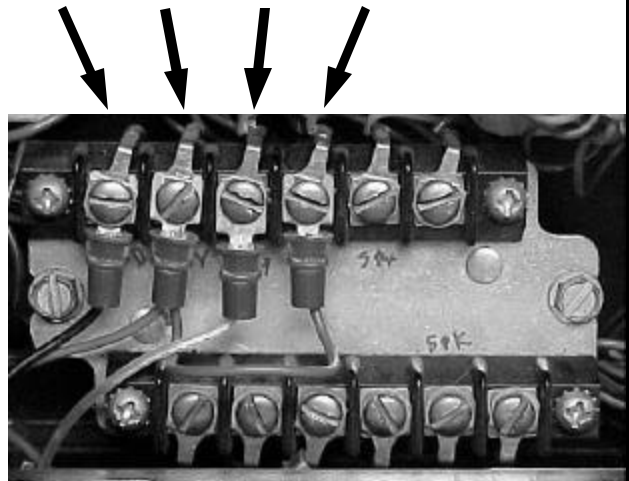
**Wurlitzer 5207  
104 select**



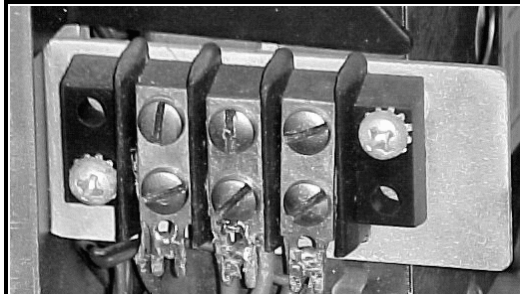
**AMI W-40 / W-80 / W-120  
40 / 80 / 120 select**

**Rowe WRA / WRB / WRC  
200 select**

COMMON 25VAC SIGNAL 25VAC\*



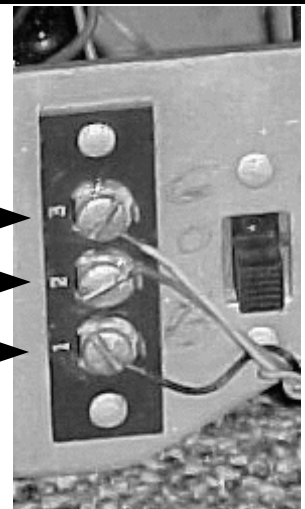
A wire jumper must be inserted from the 25VAC main power terminal to the 25VAC\* keypad motor terminal.



SIGNAL COMMON 25VAC

**Wurlitzer 5210  
200 select**

**Wurlitzer 5210  
200 select**



25VAC

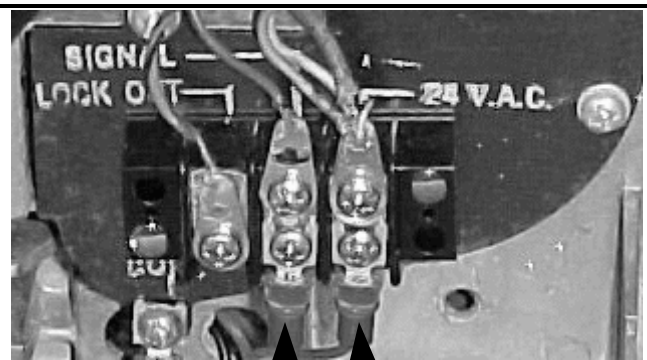
COMMON

SIGNAL



COMMON SIGNAL 25VAC

**Rock-Ola 1555  
200 select**



COMMON

SIGNAL

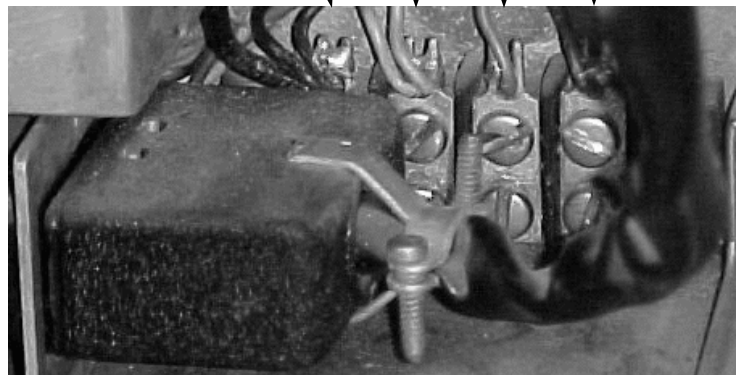
25VAC

**Rock-Ola 1558  
160 select**

**AMI WQ-200  
200 select**

COMMON 25VAC SIGNAL 25VAC\*

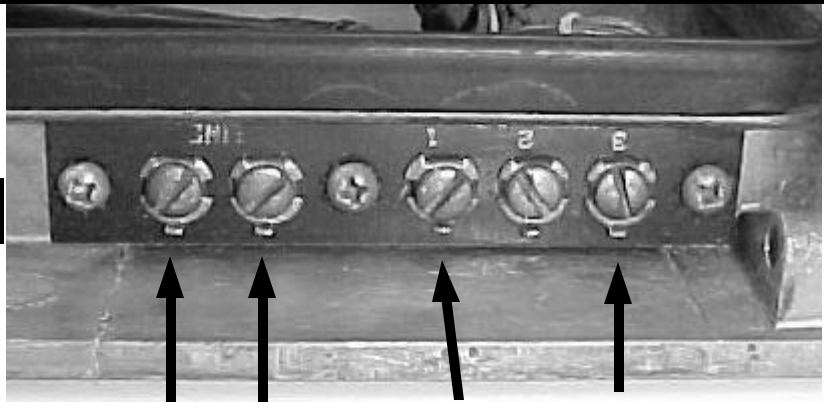
A wire jumper must be inserted from the 25VAC main power terminal to the 25VAC\* lock-out.



**Wurlitzer 3020  
24 select**

The Original 1015 Bubbler Wallbox

120VAC



SIGNAL

25VAC

This wallbox has its own “built-in” transformer and requires a 120VAC power cord. High voltage is used so be very careful when wiring up this wallbox.

The wallbox adapter only requires the two wire connection to terminal #1 and terminal #3.

**TROUBLESHOOTING**

Symptom	Possible Cause
The hub LED does not light after power is turned on.	MP3-DSP connector cable is not attached properly. Power is not applied to the MP3-DSP player. MP3-DSP or hub is defective. Defective hub unit.
The hub LED does not turn off after a few moments.	Improper or missing text filenames on the disk drive. Disk drive has wrong filesystem or is not formatted. MP3-DSP is defective. Defective hub unit.
When a wallbox selection was made, the LED did not blink.	No signal is being received from the wallbox. To test the hub input, connect a 9-volt battery across the hub wallbox wires, the LED should light.
After a wallbox selection is made, the song did not play or a different song was played.	Wrong wallbox type was set up. Wallbox signal is erratic. (see <i>TECH NOTE</i> )