

## Steam locomotive UP class 4000 "Big Boy"

### LIST OF SPARES / LISTA RICAMBI / ERSATZTEILLISTE

| Part No.<br>N° di parte<br>Teil-Nr. | Description<br>Descrizione<br>Bezeichnung  | Spare part ref.<br>N° di ricambi<br>Ersatzteil-Nr. |
|-------------------------------------|--|--|
| 1                                   | Motor + Flywheel<br>Motore + Volano<br>Motor + Schwungradscheibe   | HR2637/01  |
| 2                                   | Motor support<br>Supporto motore<br>Motorhalterung   | HR2357/02  |
| 3                                   | Main PCB board<br>Scheda principale a circuiti stampati<br>Hauptleiterplatte                                       | HR2637/03  |
| 4                                   | Light PCB<br>Scheda circuito stampato luci<br>Lichtleiterplatte  | HR2637/04  |
| 5                                   | Coupler pack<br>Confezione attacco<br>Kupplungssatz  | HR2637/05  |
| 6                                   | Worm pinion / Shaft assembly<br>Gruppo pignone solidale / Albero<br>Schneckenantriebs-/ Wellen-Baugruppe           | HR2357/06  |
| 7                                   | Universal shaft pack<br>Confezione albero universale<br>Universal-Wellensatz                                       | HR2357/07  |
| 8                                   | Gear set<br>Set ingranaggi<br>Zahnrad-Satz   | HR2357/08  |
| 9                                   | Gear box cover<br>Carter trasmissione<br>Getriebe-Abdeckung  | HR2357/09  |
| 10                                  | Front powered truck, complete<br>Azionamento anteriore<br>Antriebseinheit vorn                                     | HR2637/10  |
| 11                                  | Rear powered truck, complete<br>Azionamento posteriore<br>Antriebseinheit hinten                                   | HR2637/11  |
| 12                                  | Front bogie tender (with wheels)<br>Carrello anteriore tender (con ruote)<br>Drehgestell vorn (Tender, mit Rädern) | HR2357/12  |
| 13                                  | Wheel set (Locomotive)<br>Set ruote (Loco)<br>Radsatz (Lok)  | HR2357/13  |
| 14                                  | Wheel set (Tender)<br>Set ruote (Tender)<br>Radsatz (Tender)   | HR2357/14  |
| 15                                  | Valve gear set (Front)<br>Set distribuzione (anteriore)<br>Steuerungs-Satz (vorn)                                  | HR2357/15  |
| 16                                  | Valve gear set (Rear)<br>Set distribuzione (posteriore)<br>Steuerungs-Satz (hinten)                                | HR2357/16  |

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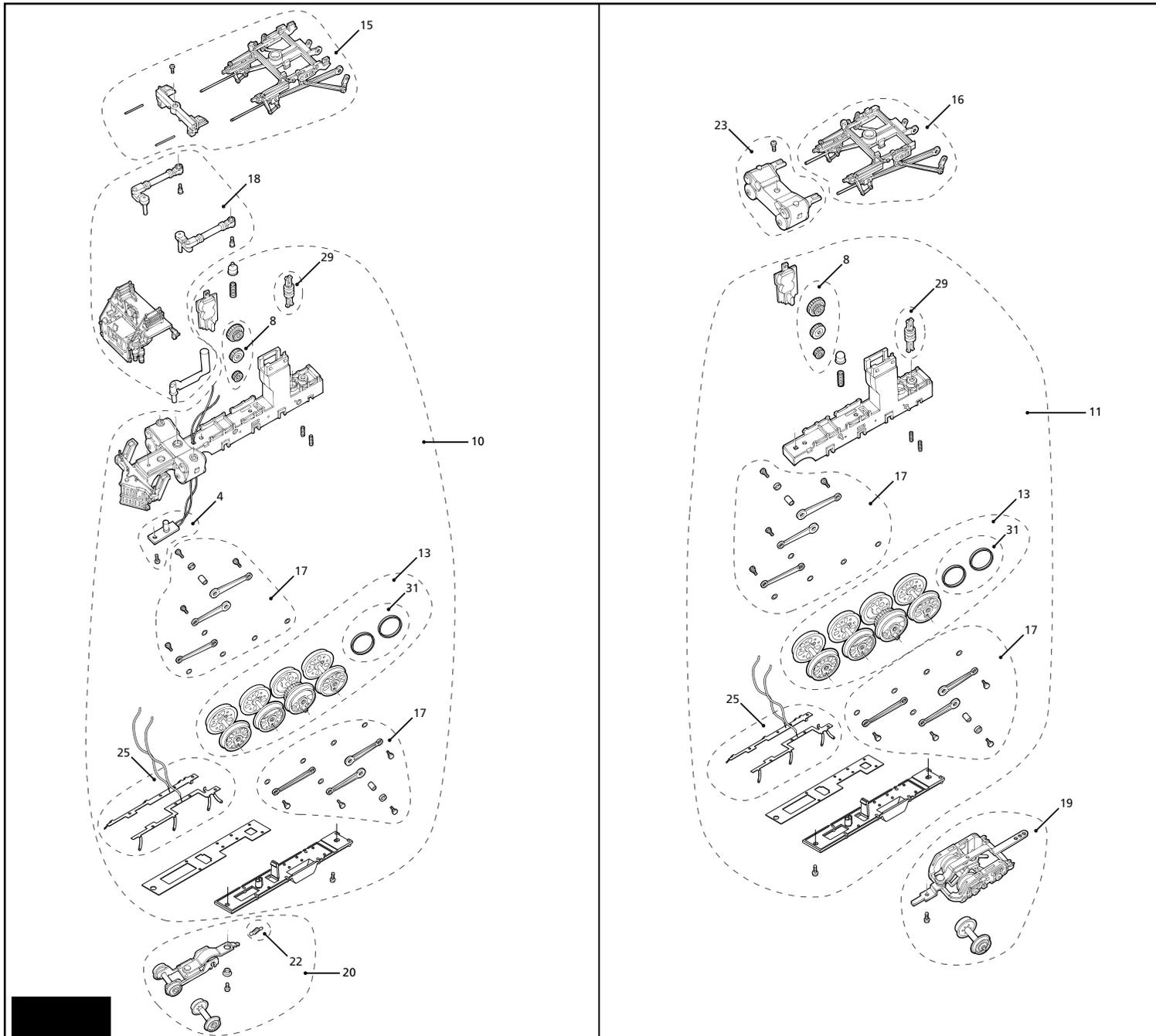
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|-------------------------------------|---|--|
| 17                                  | Connection rods<br>Bielle<br>Kuppelstangen  | HR2357/17  |
| 18                                  | Platform pack (4014)<br>Confezione piattafoma (4014)<br>Plattform-Satz (4014)                                     | HR2637/18  |
| 18                                  | Platform pack (4018)<br>Confezione piattafoma (4018)<br>Plattform-Satz (4018)                                     | HR2639/18  |
| 19                                  | Rear pony truck (with wheel sets)<br>Carrello posteriore loco (con ruote)<br>Drehgestell hinten (Lok, mit Rädern) | HR2357/19  |
| 20                                  | Front pony truck (with wheel sets)<br>Carrello anteriore loco (con ruote)<br>Drehgestell vorn (Lok, mit Rädern)   | HR2357/20  |
| 21                                  | Rear tender pony truck<br>Carrello posteriore tender (con ruote)<br>Drehgestell hinten (Tender, mit Rädern)       | HR2357/21  |
| 22                                  | Bogie springs<br>Molle carrello<br>Drehgestellfedern  | HR2357/22  |
| 23                                  | Cylinder block<br>Blocco cilindri<br>Zylinderblock  | HR2357/23  |
| 24                                  | Tender ends pack (4014)<br>Confezione estremità tender (4014)<br>Tender-Endwände-Satz (4014)                      | HR2637/24  |
| 24                                  | Tender ends pack (4018)<br>Confezione estremità tender (4018)<br>Tender-Endwände-Satz (4018)                      | HR2639/24  |
| 25                                  | Current pick ups<br>Lamelle presa di corrente<br>Radstromabnehmer   | HR2637/25  |
| 26                                  | Connecting cable (incl. plug) betw. locom. and tender<br>Connettore tender/loco<br>Tender-Lok-Steckverbinder      | HR2357/26  |
| 27                                  | Screw pack (for tender)<br>Confezione viti (per tender)<br>Schrauben-Satz (für Tender)                            | HR2357/27  |
| 28                                  | Screw pack (locomotive body shell)<br>Confezione viti (corpo)<br>Schrauben-Satz (Lokomotivkörper)                 | HR2357/28  |
| 29                                  | Centre pin pack<br>Confezione perno centrale<br>Drehzapfen-Satz   | HR2357/29  |
| 30                                  | Assembly pack (for locomotive)<br>Confezione Complessivo (per loco)<br>Baugruppen-Satz (für Lok)                  | HR2357/30  |
| 31                                  | Traction tyres pack (4 pcs.)<br>Pneumatici Trazione (4 unità)<br>Haftreifen (4 Stück)                             | HR2357/31  |



www.HornbyAmerica.com

# Rivarossi Sound Equipped Big Boy Quick Start Guide

Please go to [www.LokSound.com](http://www.LokSound.com) for a complete user manual

You have just purchased a Top of the Line Locomotive with one of the most State of Art Digital Sound Decoders on the Market. With nothing more than your Digital Command Station you have the option of 12 separate horns, 2 bells, and 2 brakesqueals. All changeable by one CV. No booster is needed! Each individual sound has a separate volume control, and up to 8 sounds can be played at one time! Not only that, but as new sounds become available and firmware gets updated, you can at anytime, hook up to our famous LokProgrammer and update your decoder! Along with outstanding sound, ALL LokSound decoders give you the benefit of the Industry Leading ESU Motor control. You'll see the difference instantly as the engine smoothly accelerates across your pike! Don't forget you also have the option to use one of our MANY lighting effects on any one of your 8(!) function outputs!

## Technical data LokSound Select Decoder

### Operational modes:

NMRA/DCC with 14, 28, 128 speed steps  
2-digit (short) or 4-digit (long) addresses  
Analog DC (Dual mode, de-selectable)  
Automatic recognition of operational mode  
Supports ALL NMRA programming modes

### Power:

Runs all DC and coreless motors  
Silent, safe 31,25 kHz pulse width frequency BEMF  
Motor output overload protected

### Function outputs:

8 outputs  
250 mA load per output  
Outputs short-circuit protected

### Sound:

Audio amplifier: 2W @40ohms load  
Speaker impedance 4-8 Ohms  
Memory Capacity 32MBit  
8 Sound Channels, All playable at once!  
Over 20 different sounds!

### Dimensions:

1.02 x 0.62 x 0.18 inch (25.5 x 15.5 x 4.5 mm)

## Default Function Assignments

| Function key | Effect                               |
|--------------|--------------------------------------|
| F0           | Directional Headlights               |
| F1           | Bell                                 |
| F2           | Playable Whistle (see Whistle Chart) |
| F3           | Coupler Clank                        |
| F4           | Aux1                                 |
| F5           | Short Whistle                        |
| F6           | Injector                             |
| F7           | Switching Mode                       |
| F8           | Steam Chuff On/Off (MUTE)            |
| F9           | Blower                               |
| F10          | Air Pump                             |
| F11          | Oil Burner                           |
| F12          | Coal Shoveling                       |
| F13          | Brake Release                        |
| F14          | Sanding Valves                       |
| F15          | Open Cylinder Cocks                  |

## Prime Movers

| Prime Mover name | CV 48 value |
|------------------|-------------|
| UP Big Boy       |             |

## Steam Whistles 16 to choose from!

| Airhorn name                     | CV 48 value |         |
|----------------------------------|-------------|---------|
| CB&Q 5-chime short bell          | 0           |         |
| D&RG 5 chime step-top cast-iron  | 1           |         |
| Great Northern 5 Chime           | 2           |         |
| Hancock 3 chime                  | 3           |         |
| Hancock 3 chime short bell       | 4           |         |
| Southern 3 chime cast iron       | 5           |         |
| New York Central 5 chime         | 6           |         |
| New York Central 6 chime         | 7           |         |
| Norfolk & Western                | 8           |         |
| Northern Pacific                 | 9           |         |
| Oldtime 3 Chime                  | 10          |         |
| Reading 6 Chime                  | 11          |         |
| Shay 4                           | 12          |         |
| JT&P Southern 610                | 13          |         |
| Union Pacific Hancock 3-chime 14 | 14          | Default |
| Nathan P3                        | 15          |         |

## Decoders Bell Types 2 to choose from!

| Bell Type | CV 48 value |    |         |
|-----------|-------------|----|---------|
| Slow Bell | 0           | 0  | Default |
| Fast Bell |             | 64 |         |

## Decoders Brake Squeals 2 to choose from!

| Brake Squeal Version    | CV 48 value |     |         |
|-------------------------|-------------|-----|---------|
| Brake Squeal Version #1 | 0           | 0   | Default |
| Brake Squeal Version #2 |             | 128 |         |

## Extended Addressing

Most Command Stations will give you the option to enter a 4 Digit Extended Address. Please refer to your Command Station's Manual for guidance as to how to do this. If your command Station does not have this feature a full list of values and instructions are available on line at [www.LokSound.com](http://www.LokSound.com)

## Start Delay

While pulling a train a Prototype Locomotive will not move until the Prime mover has worked up enough power to provide the proper amount of electricity to the traction motors. For this reason when the LokSound Select sound is idling and you turn up the throttle, the locomotive begins to move only after the Diesel engine has reached notch1. Although this behavior is very prototypical, one might not like it because it causes some delay. You can disable this startup delay by simply Changing CV124 to a value of 16. This will cause the LokSound Select decoder to immediately start moving when the throttle is turned up. However, the start up sound will not be prototypically synced with the motion anymore. Instead it will start moving immediately like most other decoders.

## Sound on/Sound Off (F8 Operation)

You will notice quickly that the F8 button will work differently than what you may be used to. This is done for two reasons. First so that you can hear both the start and Shut down sequences without any CV changes. Also so that upon power up the drain on your command station is not as great. Sound decoders draw quite a bit of power upon start up. Having the sound off initially when the layout is powered up is a much more efficient way on doing things. This can save your command station from an early demise! You may be used to other manufacturers who do this backwards. If you prefer you can easily reverse this feature in LokSound decoders.

Simply Change CV32 to 2, then CV403 to 32. Please note also that F8 only controls the prime mover sounds. On a real engine, as long as there is air, the bell and the horn will work when the prime mover is off! This is also the case in LokSound Decoders!

## Sound Volume Control table

| Function                           | CV  | Range   | Default |
|------------------------------------|-----|---------|---------|
| Master volume control              | 63  | 0 - 192 | 192     |
| Steam Chuff Volume Control         | 259 | 0 - 128 | 128     |
| Whistle Volume Control             | 275 | 0 - 128 | 128     |
| Bell Volume Control                | 283 | 0 - 128 | 64      |
| Coupler Sound Volume Control       | 291 | 0 - 128 | 128     |
| Dynamo Volume Control              | 299 | 0 - 128 | 128     |
| Air Pump Volume Control            | 307 | 0 - 128 | 128     |
| Brake Set / Brake Release          | 347 | 0 - 128 | 128     |
| Sanding valve Volume Control       | 355 | 0 - 128 | 128     |
| Short Whistle Volume Control       | 379 | 0 - 128 | 128     |
| Coal Shoveling Volume Control      | 371 | 0 - 128 | 128     |
| Injector Volume Control            | 323 | 0 - 128 | 128     |
| Open Cylinder Cocks Volume Control | 395 | 0 - 128 | 128     |
| Random sounds                      | 451 | 0 - 128 | 100     |

BE SURE CV 32 IS SET TO 1 BEFORE CHANGING CVs 257-511

## Decoder-Reset

Write value 08 into CV 08.

From time to time you may have the need to reset the decoder in your new Locomotive. Setting CV08 to a value of 08 will accomplish this. Be aware though that all user settings will be set back to factory defaults with this process. Your address will again become 03.

## Sound Choices

This Factory equipped LokSound Digital Sound Decoder was built specifically to be correct for the Prototype of the model. You may find however that you would like different Sounds. All sounds can be changed with CV48 and your Command Station. CV 48 is calculated by adding the Prime mover, the Whistle, the Bell, and the brake squeal selection you would like in your model. By adding your choices from the charts above you will arrive at the value to put in CV 48.

### Default Example:

Prime Mover = 0  
Airhorn = 14  
Bell = 0  
Brake Squeal = 0

Total = 14  
CV48 Value = 14

A full PDF Manual can be found at [www.LokSound.com](http://www.LokSound.com). Please refer to the LokSound Select Manual.

As a Reference NO BOOSTER is needed for programming.



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