

The XPA provides an interface between any device that can generate DMTF tones (such as a cordless phone) and an XpressNet. This operating manual describes the operation and use of the XPA. Please read it carefully before connecting and using the XPA.

# XPA

## XpressNET Phone Adaptor

Art. No. 23200  
Revised June 2002

*Digital*  

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*plus*  
by Lenz™



**Welcome!**

We would like to congratulate you on your acquisition of the **Digital plus by Lenz**<sup>®</sup> XPA (XpressNet Phone Adaptor) and hope you will enjoy this new form of model railroad control. If after reading this operating manual you have unanswered questions, please contact your dealer or the Lenz Agency at:

Lenz Agency of North America

PO Box 143

Chelmsford, MA 01824

ph: 978 250 1494 fax: 978 455 LENZ email: support@lenz.com

**Do you have everything?**

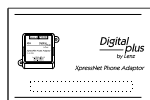
Please check to ensure that all the components have been delivered:



XPA



Telephone – connecting cable

Connecting cable for XpressNet  
(these two cables are identical)

Operating manual (this booklet)

If an item is missing, please contact your retailer to have the missing item replaced.

**1 Important information, please read first!**

Your XPA is a component of your **Digital plus by Lenz**<sup>®</sup> system and was submitted to intensive testing before delivery. Lenz Elektronik GmbH guarantees fault-free operation if you follow the advice given below:

The XPA is authorized for operation only with a system that fully supports XpressNet such as any **Digital plus by Lenz**<sup>®</sup> system. The second port of the XPA can be connected to any standard phone that is capable of tone dialing. Any use other than the one described in this operating manual is not permitted and all guarantees become void if the XPA is used in an inappropriate way.



*Do not connect the XPA to any other device. Even if other devices use the same connectors, you must not operate the XPA with those devices. The fact that the connectors are similar does not mean they will work, even if you are dealing with other model railroad control systems.*

Do not expose the XPA to moisture or direct sunlight.

## **2 Features of the XpressNet Phone Adaptor**

The XPA enables the wireless control of your model railroad. You can use any cordless telephone with your XPA that is capable of tone dialing. To use the XPA, the telephone must be set to tone dialing. The range is determined by the telephone you are using and not by the XPA. While the cordless phone is connected to the XPA, it cannot be connected to the telephone system or be used for making telephone calls. The display of your phone (if applicable) is not used by the XPA.

The following keys of the phone are used:

①	②	③	Number keys, Pound and Star key		Key "On/Talk/Answer"
④	⑤	⑥			Key "Off/Hang Up"
⑦	⑧	⑨		<b>Some telephones use the same key for answering and hanging up.</b>	
*	0	#			

### **With XPA you can:**

- Address and control 9999 DCC locomotives. Address 0 is used to control one conventional locomotive.
- Control 9 functions in locomotive decoders.
- Control multi-units (consists) which were assembled with a different XpressNet device.
- Switch 1024 turnouts and signals.
- Carry out device settings.
- Macros is supported by the selected phone.

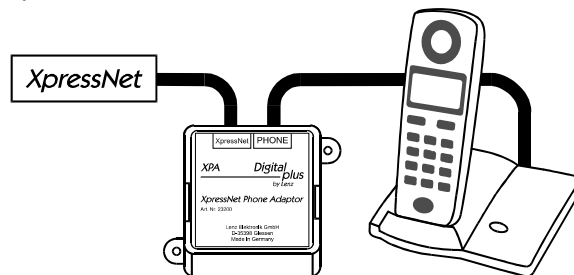
The XPA can be connected to the following components of the **Digital plus by Lenz®** system: **LZ100; SET02; SET03; compact**

**Note: The XPA requires a Digital plus command station software version of 3.0 or greater.**

The XPA cannot be used with devices which use an older software version. If your system has an older version, contact your dealer for an upgrade for your system.

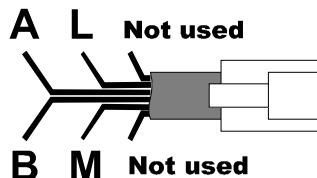
### 3 Connection

First connect your cordless telephone to the XPA. Connect the socket labeled "PHONE" of the XPA with the base station of your phone. To do so, use one of the cables enclosed with the XPA or the phone cable which is normally used for connecting the phone to the telephone network.



**NOTE: Use only the supplied cable for connecting the XPA to the XpressNet. Standard telephone cables will not work for this purpose.**

Connect the XPA to the **XpressNet** using the second cable provided. Plug one end into the socket labeled "**XpressNet**" on the XPA and connect the other end to one of the RJ11 ports on a Lenz LA152 **XpressNet** Adapter, an Atlas Connector Panel #322, an **XpressNet** Tee connector or directly into the **XpressNet** port on the pack of an Atlas Commander. If you do not have an available RJ11 port, you can connect the XPA with the screw terminals LMAB of an LZ100, or wire it directly to the **XpressNet**. To do this cut the connector off one end of one of the cables and connect the cable conductors with the terminals of the LZ100 or of your **XpressNet**. The pin assignment is shown in the illustration to the right.









#### The XpressNet address

To ensure the exchange of information with the command station is problem-free, each device connected to the **XpressNet** must have its own unique *device address*. From the factory the XPA is set to address 01. If you are already operating another **XpressNet** device with this address, you will have to assign a different, unused address to your XPA. You will find information on setting an **XpressNet** address in the "Device Settings" section found later in this manual.

#### 4 Selecting a locomotive address

To set a locomotive address, follow these simple steps:

- |   |   |   |
|---|---|---|
| 1 |    | Press "Talk or "Phone On" key (turn on phone).                    |
| 2 |    | Press the "Pound" key.  |
| 3 |  ...  | Enter the locomotive address using the number keys on your phone. |
| . |    | Press the "Star" key.   |

The numbers that you typed in during step 3 is used as the locomotive address. Press  to indicate the end of entering the address, you now control that locomotive.











The permitted range of addresses is 0 to 9999 or the range allowed by the command station whichever is less.

After answering the phone, the XPA automatically uses the locomotive address which was selected last.

If you wish to select a different address after having controlled a locomotive, you do not have to hang up the phone. Simply start again with Step 2 to enter a new address.

#### 5 Controlling locomotive speed and direction

After you have selected a locomotive address, you can control the locomotive with these keys:

Reduce speed by single steps 	 Switch direction to "forward"	 Increase speed by single steps
Reduce speed by medium steps 	 Set speed to 0	 Increase speed by medium steps
Reduce speed by large steps 	 Switch direction to "backward"	 Increase speed by large steps
	 Emergency stop or emergency shutdown	

Press key 5 to set the speed to "0". The locomotive stops using the deceleration CV values set in the decoder.


The keys 2 and 8 switch the direction only if the speed has previously been set to "0". If the speed is not zero when the direction key is pressed the speed is set to "0". The direction will then be changed the next time the direction key is pressed.

## 6 Controlling locomotive functions

While operating the locomotive, you can control the locomotive functions by pressing the following keys:


1. \* press the "Star" key to tell the XPA you wish to control a function.
2. 0 ... 8 enter the number of the desired function to turn the function on or off.

Pressing a function the first time turns the function on, pressing the function a second time turns the function off.

 Note: using the XPA with the LZ100 command station:  
If one of the functions F1 to F8 is set to momentary operation, the function is activated for a settable period of time after the key has been pressed or until another key is pressed. The duration of this time is set in "Device settings".

## 7 Switching turnouts and signals







To select a turnout address, follow these simple steps:

1.  Press the "Talk/Phone On" key (turn on the phone) if the XPA is not already on.
2. # Press the "Pound" key.
3. 0 ... 9 Enter the turnout address. The permitted range is 1 to 1024.
4. # Press the "Pound" key.
5. 1, 4, 7 Switch turnout to diverge "-".
- or
- 3, 6, 9 Switch turnout to straight "+".
6. \* Press the "Star" key to return to locomotive control mode using the last address that was being controlled.
- or
- # Press the "Pound" key to select a new turnout address (then continue with Step 3)











While switching turnouts, pressing "0" will continue to trigger an emergency stop or emergency shutdown.

## 8 Device settings

Device settings can only be carried out immediately after answering the phone. Use the following procedure:

1		Press the "Talk/Phone On" key
2		Press the "Star" key.
3	 ... 	Enter the number for the desired setting (see below).
4		Press the "Star" key.
5		Press "Talk/Phone Off" key to complete

The following settings can be changed using this procedure:

Number	Setting
 1 - 31 	New XpressNet address.
 40 	Key "0" triggers an emergency off (voltage on the track is switched off).
 41 	Key "0" triggers an emergency stop (locomotives are stopped, voltage on the track remains switched on).
 50 - 60 	Sets the duration of a momentary function from approx. 0.2 to 2 sec.
 99 	Resets the XPA to factory default settings: XpressNet address: 1 Default locomotive address: 3 Key "0": Set to Emergency stop Time for momentary function: 50

## 9 Audio signals

After answering the phone you can hear the following signals:

Low/High tone:	You can enter a locomotive address, a turnout address or enter a device setting.
Busy Signal:	You cannot send commands to the command station. The cause is probably a wrong XpressNet connection or the device is not addressed by the command station. Ensure that the XPA's XpressNet address is valid for the command station.
Short deep tone:	An entry (command) cannot be understood. Example: selecting a 4-digit locomotive address using the "compact".

## 10 North American Warranty

Lenz GmbH does everything it can do to ensure that its products are free from defects and will operate for the life of your model railroad equipment. From time to time even the best engineered products fail either due to a faulty part or from accidental mistakes in installation. To protect your investment in Digital plus products, Lenz GmbH offers a very aggressive 10 year Limited Warranty.

This warranty is not valid if the user has altered, intentionally misused the Digital Plus product, or removed the product's protection, for example the heat shrink from decoders and other devices. In this case a service charge will be applied for all repairs or replacements. Should the user desire to alter a Digital Plus Product, they should contact Lenz GmbH for prior authorization.

**Year One:** A full repair or replacement will be provided to the original purchaser for any item that that has failed due to manufacturer defects or failures caused by accidental user installation problems. Should the item no longer be produced and the item is not repairable, a similar item will be substituted at the manufacturer's discretion. The user must pay for shipping to an authorized Lenz GmbH warranty center.

**Year 2 and 3:** A full replacement for any item will be provided that has failed due to manufacturer defects. If the failure was caused by accidental user installation or use, a minimal service charge may be imposed. Should the item no longer be produced and the item is not repairable, a similar item will be substituted at the manufacturer's discretion. The user must pay shipping to and from the authorized Lenz GmbH warranty center during this portion of the warranty period.

**Year 4-10:** A minimal service charge will be placed on each item that has failed due to manufacturer defects and/or accidental user installation problems. Should the item no longer be produced and the item is not repairable, a similar item will be substituted at the manufacturer's discretion. The user must pay shipping to and from the authorized Lenz GmbH warranty center during this portion of the warranty period.

Please contact your dealer or authorized Lenz GmbH warranty center for specific instructions and current service charges prior to returning any equipment for repair.

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This equipment complies with Part 15 of FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.



Please save this manual for future reference!

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