KENWOOD

KSC-Y32

RAPID CHARGER

INSTRUCTION MANUAL

JVCKENWOOD Corporation

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KSC-Y32 INSTRUCTION MANUAL
RAPID CHARGER

CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

	THE LIGHTNING FLASH WITH ARROWHEAD SYMBOL, WITHIN AN EQUILATERAL TRIANGLE, IS INTENDED TO ALERT THE USER TO THE PRESENCE OF UNINSULATED "DANGEROUS VOLTAGE" WITHIN THE PRODUCT'S ENCLOSURE THAT MAY BE OF SUFFICIENT MAGNITUDE TO CONSTITUTE A RISK OF ELECTRIC SHOCK TO PERSONS.
	THE EXCLAMATION POINT WITHIN AN EQUILATERAL TRIANGLE IS INTENDED TO ALERT THE USER TO THE PRESENCE OF IMPORTANT OPERATING AND MAINTENANCE (SERVICING) INSTRUCTIONS IN THE LITERATURE ACCOMPANYING THE APPLIANCE.

One or more of the following statements may be applicable:

FCC WARNING

This equipment generates or uses radio frequency energy. Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual. The user could lose the authority to operate this equipment if an unauthorized change or modification is made.

INFORMATION TO THE DIGITAL DEVICE USER REQUIRED BY THE FCC

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can generate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that the interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.

FEATURES

- Capable of charging Li-ion and Ni-MH battery packs when either attached to or removed from the transceiver.
- Easy to use design allows you to start charging by simply sliding the battery pack into the charging slot.
- Overcharge protection. Protects against reduced battery pack life caused by excessive charging. After the rapid charge cycle has finished, the charger automatically switches to trickle charge (Ni-MH).
- A combination of LED indicator of 3 colors, informs you of the current charging status and battery pack condition.

SUPPLIED EQUIPMENT

Item	Parts number	Quantity
Charger	W08-1341-XX	1
AC adapter	W08-1348-XX	1
Instruction manual	B62-2558-XX	1

SAFETY PRECAUTIONS

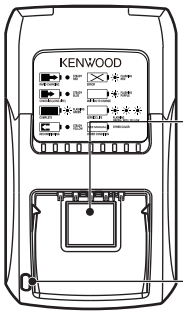
Please read all safety instructions before using this charger. For best results, be aware of all warnings on the charger, the battery pack, and the product using the battery pack. Follow the provided operating instructions, and retain them for future reference.

- Do not use in vehicles.
- Do not disassemble the charger. Incorrect re-assembly can cause fire or electric shock.
- Do not block any ventilation openings, as this may cause smoke or fire.
- Keep the charger away from inflammable objects.
- Use of attachments/batteries not recommended by nor sold by **KENWOOD** may cause fire, electric shock, and/or injury.
- Do not insert or drop metal objects (such as clips, etc.) into the charger as this may cause smoke or fire.
- Do not expose the charger to rain or moisture, to avoid the risk of fire or electric shock.
- If the transceiver and battery pack are wet, do not place them into the charger. Doing so may cause damage. Before charging, wipe the transceiver and battery pack off with a dry cloth.
- Always remove the AC plug from a AC outlet before attempting to inspect or clean the charger. Removing the battery packs or changing the controls does not remove the AC voltage from the charger.
- Position the AC cord so it will not be stepped on, tripped over, nor subjected to damage.
- Always remove the AC cord from an AC outlet by pulling on the AC plug rather than the AC cord.
- Do not use the charger if it has a damaged AC cord, or if the charger has been damaged in any way. Contact your **KENWOOD** dealer to replace or repair the damaged part.
- Prevent strong impacts, such as caused by dropping, as the charger can be damaged and/or injuries may occur.
- Do not use the charger in hot or humid environments, in direct sunlight, nor near heaters.
- Do not use solvents such as benzene or paint thinner to clean the charger.
- Do not turn the charger power on when liquids, such as water or juice, have been dropped into the charger; applying power at this time may cause fire, smoke, or other damage.
- Do not turn the charger power on after the charger has been struck by an item or dropped, as it may have been damaged during the impact.
- Do not short the charging terminals with metal objects.
- Use only the supplied AC adapter.

APPROXIMATE CHARGING TIME

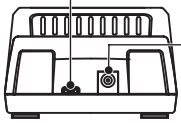
Li-ion Battery Pack	Charging Time		Ni-MH Battery Pack	Charging Time	
	FULL CAPACITY CHARGING	LONG LIFE CHARGING		FULL CAPACITY CHARGING	LONG LIFE CHARGING
KNB-L1	150 minutes		KNB-32N	170 minutes	
KNB-L2	180 minutes		KNB-54N	170 minutes	
KNB-L3	240 minutes				
KNB-33L	140 minutes				
KNB-47L	140 minutes				
KNB-48L	170 minutes				

ORIENTATION



Charging slot
Slide a battery pack or a transceiver equipped with a battery pack into this slot.

LED indicator
Informs you of the current charger status.



PC (Micro USB) port *
The USB connector allows you to directly connect to a computer by using a commercially available USB cable.

AC adapter jack
Plug in the supplied AC adapter here.

* By connecting to a PC using a commercially available USB cable (USB 2.0 A Male to Micro B) and through installing an optional "KAS-12 BATTERY READER", the record of the battery pack equipped with a data terminal can be monitored during charging.
The USB driver is included with KAS-12.
You can also download the latest driver from URL: http://www2.jvckenwood.com/usb-com/.
(This URL may change without notice.)

ATTENTION:
◆ Use a USB cable shorter than 3 m.

SPECIFICATIONS

AC Voltages	100 V - 240 V AC 50 Hz / 60 Hz
Dimensions (W x H x D) (charger only)	160 x 90 x 58 mm / 6.30 x 3.54 x 2.28 in.
Weight (charger only)	Approx. *** g / *** oz

ATTENTION:
◆ Check the rating label attached to the bottom of the charger for other important specifications.

CHARGING TIPS

- Using the transceiver while charging its battery pack will interfere with correct charging.
- If the operating time of a battery pack decreases although the battery pack is fully and correctly charged, perform reconditioning if the battery pack is equipped with a data terminal. If the operating time of the battery pack still decreases, the battery pack life is over. Replace the battery pack.
- The ambient temperature should be from 5°C to 40°C (41°F to 104°F) while charging is in progress. When the ambient temperature is in the upper limits (close to 40°C (104°F)), the charging time may become longer than normal.
- The charging times provided are obtained when a battery pack discharged to 1 V/cell x 6 (Ni-MH) or 3 V/cell x 2 (Li-ion) is charged at normal temperatures. This charging time varies depending on the degree of discharge and the ambient charging temperature.
- Repeatedly recharging a fully charged battery pack, or almost fully charged pack, shortens its operating time. To resolve this problem, use the pack until it is completely discharged, 1 V/cell x 6 then recharge the pack to full capacity (Ni-MH).
- The battery life in charge/discharge cycles is approximately 300-500. However, overcharging and excessive discharging shortens the battery pack life.
- When using this equipment near a radio, transceiver or television, you may experience interference with reception.

CHARGING PROCEDURE

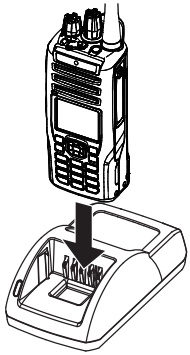
WARNING

Do not use in explosive atmospheres (gases, dust, fumes, etc.).

ATTENTION:

◆ Always switch OFF a transceiver equipped with a battery pack before inserting the transceiver into the charger.

1 Plug the AC adapter cable into the adapter jack located on the rear of the charger.
2 Plug the AC plug into an AC outlet.
3 Slide a battery pack or a transceiver equipped with a battery pack into the charging slot.
   - Make sure the metal contacts of the battery pack mate securely with the charger terminals.
   - The indicator lights red or blue to charging starts (refer to the charger status table).
4 When charging is completed, the indicator flash green. Remove the battery pack or the transceiver from the charging slot.
   - When the charger will not be used for a long time, unplug the AC adapter from the AC outlet.



CHARGER STATUS TABLE

Indicator Color	Meaning
Red (FULL CAPACITY CHARGING)	A battery pack or a transceiver equipped with a battery pack is in the charging slot and charging has started.
Flashing red	The battery pack or the charger is defective.
Not light	The battery pack contacts are not properly mated with those of the charger.
Flashing green and yellow	The temperature of the battery pack has not satisfied the charging start temperature. In this instance, remove the battery until its temperature increases, then recharge it.
Flashing green	Charging is completed; remove the battery pack or the transceiver from the charging slot.
Yellow	Reconditioning
Blue (LONG LIFE CHARGING)	The battery pack will not be fully charged to 100 %. The battery pack is being charged to approximately 80 %.
Flashing purple	• If the temperature of the battery pack exceeds the preset temperature during charging, charging stops and goes into charging standby mode until the temperature drops within the preset temperature. Charging will resume automatically if the temperature of the battery pack drops. • After charging starts, the data of the battery pack is read.
Flashing red, green, and yellow repeatedly	The battery pack has deteriorated. Replace the battery pack with a new one.

RECONDITIONING (For Ni-MH battery equipped with data terminal only)

■ Automated Battery Reconditioning

When a Ni-MH battery pack equipped with a data terminal is used with this charger, the charger will read the number of discharging and charging cycle of the battery pack. When the preset number is reached, reconditioning (full discharging and charging) is performed. This allows you to restore the charging capacity of the battery pack.
If reconditioning is deemed necessary, reconditioning starts automatically. The LED indicator of the charger lights up in yellow and discharging starts.
Once the discharging is completed, charging starts automatically and the LED indicator lights up in red.

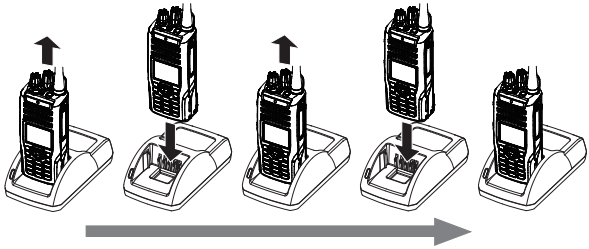
ATTENTION:

- ◆ Depending on the usage condition of the battery pack, reconditioning may not be performed even if the preset number of cycle is reached.
- ◆ If the preset number of cycle is reached and charging is done on a charger other than KSC-Y32, reconditioning will be skipped. Reconditioning will not start until the next preset number is reached.
- ◆ If the effect of the reconditioning is insufficient, reconditioning may start again.

■ Manual Battery Reconditioning

After normal charging starts (indicator lights up in red), the record of the battery pack is read (indicator blinks 3 times in purple). Within the three blinks in purple, repeating the actions of removing the battery pack from the charger and placing it back to the charger twice within 5 seconds will force reconditioning to start.

To start and stop manual battery reconditioning



■ Stopping Reconditioning Manually

After reconditioning is initiated and when discharging is performed (indicator lights up in yellow), repeating the actions of removing the battery pack from the charger and placing it back to the charger twice within 5 seconds will force reconditioning to stop. Normal charging will begin when reconditioning stops

ATTENTION:

- ◆ Performing reconditioning frequently may shorten the life-span of the battery.
- ◆ If reconditioning is initiated manually, remove the battery pack from the charger and place it back to the charger to resume normal charging operation

LONG LIFE CHARGING MODE (For Li-ion battery equipped with data terminal only)

LONG LIFE CHARGING MODE is a charging mode whereby the battery is charged to approximately 80% instead of fully charged to 100%.
By connecting to a PC using a commercially available USB cable (USB 2.0 A Male to Micro B) and through installing an optional "KAS-12 BATTERY READER", you can charge the battery pack in this mode.
Charging the battery pack in this mode repeatedly can extend the life-span of the battery pack.
The LED indicator lights up in blue when charging the battery pack in this mode.

ATTENTION:

- ◆ The battery pack is not fully charged in this mode so the battery duration from each charging becomes shorter.

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