After Sales Technical Documentation

NHE-5/NHK-5 INSTALLATION INSTRUCTIONS

Original, 32/96 NMP Part No. 0275073

Technical Documentation

AMENDMENT RECORD SHEET

Amendment Number	Date	Inserted By	Comments

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NHE-5 & NHK-5 INSTALLATION INSTRUCTIONS

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Introduction

General

This installation guide has been prepared to provide the basic information necessary to install car kits. This guide is not intended to be definitive, because different types and models of vehicle will require different installation work. The information given is for general guidance only.

The terms of warranty demand that this car kit be installed by an experienced installation facility. An end user should never attempt to install this car kit without professional assistance as the installation requires special tools and knowledge.

Please refer to the telephone's user guide for instructions on the telephone's operation, care and maintenance, including important safety information.

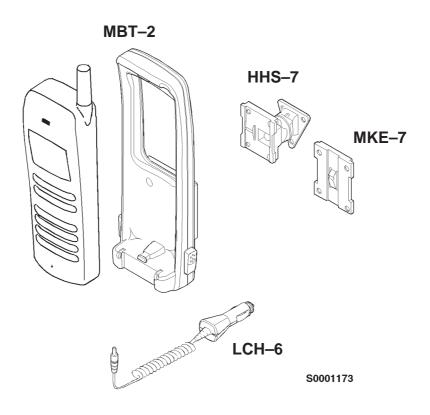
Note: Read the warnings below before beginning the installation procedure.

WARNINGS

- 1 ENSURE THAT THE VEHICLE BATTERY IS DISCONNECTED BE-FORE YOU START THE INSTALLATION PROCEDURE, AND THAT IT REMAINS DISCONNECTED DURING THE PROCEDURE.
- 2 DO NOT SMOKE OR USE OPEN FLAMES WHEN WORKING NEAR THE VEHICLE'S FUEL SYSTEM.
- 3 ENSURE THAT ELECTRICAL CABLES, HYDRAULIC LINES AND FUEL LINES ARE NOT DAMAGED DURING INSTALLATION.
- 4 ENSURE THAT NORMAL CONTROL AND OPERATION OF THE VEHICLE IS NOT IMPAIRED BY THE INSTALLATION, PARTICULARLY THE BRAKES AND STEERING.
- ALTHOUGH ELECTRONIC SPEED CONTROL, ABS ANTI-LOCK BRAKE AND FUEL INJECTION SYSTEMS ARE RELATIVELY IMMUNE TO MALFUNCTION CAUSED BY NEARBY RADIO TRANSMISSIONS, SHOULD YOU EXPERIENCE FALSE OPERATION OF THESE SYSTEMS OR ARE IN ANY DOUBT WHATSOEVER AS TO THEIR FUNCTIONALITY, PLEASE CONSULT THE VEHICLE DEALER.
- THE CAR KIT IS SUITABLE FOR USE ONLY IN VEHICLES WITH A 11..32 V NEGATIVE GROUNDING. USE ON OTHER SUPPLY VOLTAGES OR ALTERNATIVE POLARITY WILL DAMAGE THE EQUIPMENT.
- 7 THE PHONE SHOULD NOT BE LEFT SWITCHED ON FOR EX-TENDED PERIODS WITHOUT RUNNING THE VEHICLE'S ENGINE. FAILURE TO COMPLY COULD DRAIN THE VEHICLE'S BATTERY.

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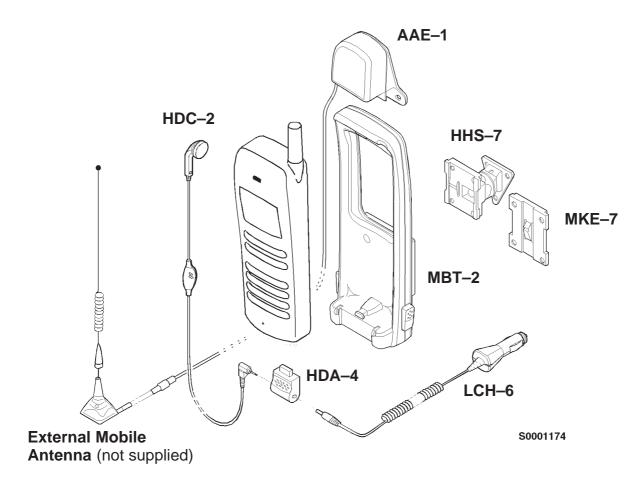
Basic Car Kit



Product Name:	Type:	Code:
Phone Holder Mounting Plate Swivel Mounting Plate	MKE-7 HHS-7	0620028 0650007
Universal Mobile Charger	LCH-6	0675076

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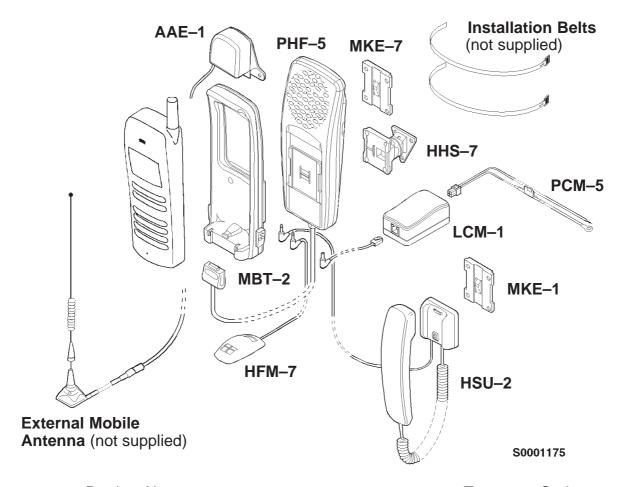
Extended Car Kit



Product Name:	Type:	Code:
Phone Holder	MBT-2	0620028
Mounting Plate	MKE-7	0650007
Swivel Mounting Plate	HHS-7	0075070
Universal Mobile Charger	LCH-6	0675076
External Antenna Module	AAE–1 HDA–4	0750080 069
Headset Adapter Headset	HDA-4 HDC-2	0694017

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Complete Car Kit



Туре:	Code:
MBT-2	0620028
PHF-5	0694028
MKE-7	0650021
MKE-1	0650007
HHS-7	
LCM-1	0675077
PCM-5	0730058
AAE-1	0750080
HFM-7	0690002
HSU-2	0640078
LCH-6	0675076
HDC-2	0694017
	MBT-2 PHF-5 MKE-7 MKE-1 HHS-7 LCM-1 PCM-5 AAE-1 HFM-7 HSU-2 LCH-6 HDC-2

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Component Parts

Phone Holder MBT-2

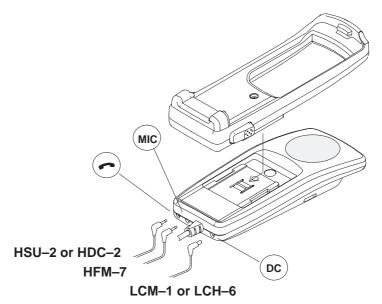
The phone holder allows the phone to be firmly located in a convenient position. The phone holder is attached to the vehicle interior using mounting plate MKE–7 or alternatively swivel mounting plate HHS–7.

Basic Handsfree Unit PHF-5

The basic handsfree unit enables the phone to operate in handsfree mode. The unit is attached to the vehicle interior using mounting plate MKE–7, or swivel mounting plate HHS–7. A temporary installation can be achieved using the installation belts.

Power is supplied either from the vehicle battery via the fixed mobile charger or from the cigarette lighter socket via the universal mobile charger. The basic handsfree unit provides the power supply to the phone via the system connector.

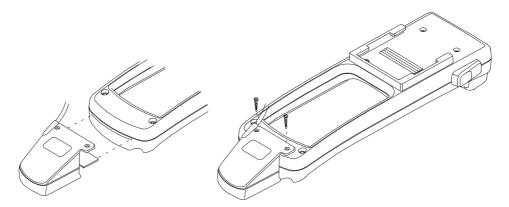
The handset, HSU-2, or the headset, HDC-2, connect to the socket. The HF microphone, HFM-7, connects to the **MIC** socket. The phone holder can be attached to the basic handsfree unit as shown.



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External Antenna Adapter AAE-1

The external antenna adapter allows an external antenna to be capacitively coupled to the phone's antenna when the phone is located in the phone holder. The external antenna adapter is fastened to the top of the holder as shown below.



Mounting Plate MKE-7 and Swivel Mounting Plate HHS-7

MKE-7 is a fixed position mounting plate; HHS-7 is swivel mounting plate which allow for adjustable fixing. Both mounting plates are interchangeable.

Fixed Mobile Charger LCM-1

The fixed mobile charger provides a power supply for the basic handsfree unit.

Output Power Cable PCC-1

The output power cable connects the fixed mobile charger to the basic handsfree unit.

Power Cable PCM-5

The power cable connects the fixed charger to the vehicle supply. The red wire must be connected to the +ve supply controlled by the vehicle's ignition key via the supplied fused connector. The black wire must be attached to a good negative GND connection.

Handsfree Microphone HFM-7

The handsfree microphone connects directly to the basic handsfree unit.

Handset HSU-2

The handset is installed using a mounting plate MKE-1 as supplied. The handset connects directly to the basic handsfree unit.

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Headset HDC-2

A headset offers privacy during a call. The headset connects to the headset adaptor's socket or the socket located at the base of the basic handsfree unit.

Headset Adapter HDA-4

The headset adapter provides connections between the headset, power supply and the phone. The adapter plugs into the base of the phone.

The headset adapter provides the power supply for the phone which must be connected to the headset adapter; power is supplied via the universal mobile charger.

Universal Mobile Charger LCH-6

The universal mobile charger enables the phone to be charged via the vehicle's cigarette lighter socket. The charger connects to the headset adapter via a d.c. jack socket located on the side of the adaptor or the basic handsfree unit via a d.c. jack socket located on the base of the unit marked **pc**. The supply voltage may vary between 11 and 32 V.

External Mobile Antenna (not supplied)

The external antenna adapter is designed to operate with a high quality external antenna. However, due to many different types of antennas being available, an antenna is NOT included as part of car kits. Please, consult the dealer to find out which is the most suitable antenna type for your installation.

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Installation

There are some important aspects that require special attention in positioning car kit accessories.

The positioning of the phone holder is the most important factor when trying to achieve the most comfortable position for the user. The location of the holder should be selected so that the visibility of the phone's display is good under all lighting conditions, but not so that the driver's attention is easily distracted. The holder should be located so that the driver can easily reach the keypad. Under no circumstances should the holder prevent the driver from controlling or operating the vehicle in any way or observing traffic.

The handset should be located within easy reach of the user, ensuring that the driver is not prevented from controlling or operating the vehicle in any way or observing traffic.

The fixed mobile charger can be installed in a hidden location, since there is no need to disconnect cables during normal operation. Ensure the location does not subject the unit and cables to moisture or mechanical pressure. Also remember clean the mounting tape location properly before installing.

The handsfree microphone can be installed on the driver's sun visor or the A-pillar. Ensure the microphone is as close to the driver's mouth as possible, and attached to a surface that is mechanically quiet. The microphone should be mounted at least 3 ft/1 m away from the handsfree unit speaker to avoid acoustic feedback. See separate microphone installation guide.

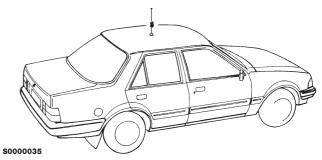
Ensure cables are routed as far away as possible from the vehicle's electronic systems (refer to WARNINGS). Also ensure cables are not subjected to undue mechanical stress e.g. under seats or against sharp edges. The external antenna adapter should always be connected to the antenna via a non–radiating cable (e.g. coax).

The most important component of the installation is the antenna. The location of the antenna as well the quality of the antenna and its installation have a considerable influence to the overall performance of the whole system. Therefore it is necessary to emphasize some aspects, which too often have caused unnecessary service work.

The best place for the antenna is the rooftop. The overall performance of a rooftop antenna is clearly superior to any other antenna type or location. The Antenna should be mounted in a position such that no part of a human body will normally rest too close to any part of the antenna unless there is a an intervening metallic screen, for example, the metallic roof.

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- highest place in the car
- proper ground place
- omnidirectional radiation pattern
- minimum risk for disturbances
- user safety



After drilling the hole for the antenna remember to clean the hole from the drilling swarf, so that surface is even. This is needed in order to ensure proper and reliable connection between the ground plane and the antenna. After cleaning it is advised to apply some rust—proofing compound to the hole.

Mount the base of the antenna tightly to its place. Consult the antennas manuals for determining the maximum bending angle before attempting any bending operation.

To avoid drilling a hole in the vehicle's bodywork, a glass—mounted antenna can be chosen and located on the rear window of the vehicle.

Try to route the antenna cable so that possible sources of disturbances are avoided, as well anti–skid brake systems. The shorter the antenna cable, the smaller the attenuation, and the better the performance of the antenna. The antenna coupler should always be connected to the antenna via a non–radiating cable (e.g. coax).

Most of the antennas today have adapted the mini—crimp connector system which eliminates the need for special crimping tools and connectors. If however the purchased antenna has traditional connectors, use only proper connectors and tools. The antenna coupler uses TNC—female type antenna connector for reasons of reliability and attenuation.

All installations should take into account any special requirements of the customer. However, should the customer require an installation that is illegal or unsafe these facts must be pointed out to the customer and a policy of non–compliance adopted.

Testing

Once installed, the equipment should be tested to ensure that it is operating satisfactorily and that the position of the units does not impair on the driver's ability to control and operate the vehicle in any way.

Use the phone to make a call when the vehicle is parked with the engine running. During the call, switch off the engine. Ensure that the phone is operational with the engine running and with the engine switched off. For operating information refer to the 'User's Guide' supplied with the phone.

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