

For the SIKU **CONTROL32** product sector, 2007 marks the start of a new generation of radio controlled models. The first radio-controlled 1:32 scale SIKU road truck will reach the market in autumn 2007, another world premiere. This new MAN low loader truck achieves a technical level never before reached in SIKU's company history, coupled with maximum enjoyment and ultra easy operation. A plethora of electronic functions takes both children and adults down the entertaining road to the fascinating world of trucks and truckers.

The range of SIKU **CONTROL32** agricultural models gains a new high-power family member in 2007, in the form of the Claas Axion 850. Equipped with SIKU's tried and proven infrared controlled system electronics, the Claas fits neatly into the existing SIKU **CONTROL32** range of model tractors.

The unique scale remote controlled play system

Unlike certain other remote controlled models, our new releases, like all SIKU **CONTROL32** models, are designed in such a way that robust children's play is possible without difficulty and without breakage, despite their technically sophisticated electronic and servo assisted functions.

Thus, now for the first time worldwide, there exists a remote controllable 1:32 scale (die cast!) model vehicle system that also features compatible electronic accessories. These models, conceived not as so-called "island" solutions but as integrated remote controlled system solutions within an organized true to-scale play system, can be integrated with no difficulty into the established SIKUFARMER system using standard components.

SIKU **CONTROL32** defines its concept as an independent play system for both children and adults which, in addition, can be integrated with no problems into the existing 1:32 scale SIKUFARMER model worlds. The result is an integrative combination of remote-controlled and manually operable models that constitute genuine innovation on the toy market with their far reaching conception. With SIKU **CONTROL32**, children can dynamically reproduce in their playful scale agricultural and road traffic situations. The SIKU **CONTROL32** series is therefore a play system that provides both educational benefit and great simultaneous enjoyment.

The MAN TGA LX with low loader

A multiple premiere at SIKU! The MAN with low loader is the first 1:32 scale SIKU road truck and the first SIKU **CONTROL32** model to be launched as a world premiere with a 2.4 GHz radio remote control system (ISM band). The radio technology used is largely insensitive to other known systems such as Bluetooth and WLAN. And, thanks to the special features of this radio system, obstructions such as chairs, tables, cupboards and even walls no longer constitute any barrier to reception.

This high end system functions, for the first time ever in the field of radio controlled vehicles, without fixed channel assignments. The remote control unit and the model communicate with one another via a transceiver unit, thus utilizing the mode which automatically connects the control system and the model. A single remote-control can therefore be used to operate a large number of models. In addition, several models can be controlled in parallel without the

necessity for time consuming agreement on channels and frequencies. The system requires only a short antenna, which is integrated into the model and the control unit, so that it can never get in the way.

The SIKU **CONTROL32** METAL model is equipped with a plethora of functions.

The MAN TGA LX tractor's travel and steering functions are of proportional design. The rear coupling can be released electronically, while coupling takes place mechanically. Coloured LEDs front and rear for the lights. Separately controllable direction indicators and two rotating lights on the cab round off this unique model. A new POWER ACCUMULATOR (rechargeable battery) supplies the model with sufficient power to pull even heavier scale loads.

The new low loader in this SIKU **CONTROL32** articulated vehicle is also fitted with the new transceiver unit, permitting it to be controlled independently of the tractor. So there is no need for any wiring between the tractor and the trailer. The model's legs, like the loading ramps, are also equipped with servo motors and can be raised and lowered electronically. Red LED rear lights and separately controllable direction indicators, plus an accumulator (rechargeable battery) to permit independent energy supply, are all part of the standard equipment.

The set is supplied with a new charger unit which fits both the standard and the POWER rechargeable battery.

TECHNICAL DETAILS

General

- The MAN truck with low loader is a true to scale die cast zinc model conforming strictly to the 1:32 scale favoured by collectors. The combination of a series produced 1:32 scale metal model with radio control is a feat of engineering of the technically highest and most demanding calibre. A unique achievement anywhere in the world in the children's and adult toys product field.
- Radio control data transmission (ISM band, 2.4 GHz; see "The technology" below for details)
- Transceiver technology integrated into the prime mover and the trailer

The tractor

- Metal tractor with integrated radio transceiver technology
- Tractor with three servo motors
- Steering movements can be finely metered thanks to digital proportional control
- Forward/reverse selection finely controllable thanks to digital proportional control;
- High-precision manoeuvring possible
- The trailer coupling opens electronically; coupling is mechanical;
- The function can be switched via the remote control module
- Front lights (white LEDs) integrated into the radiator grille, switchable via the remote control module
- Rear lights (red LEDs) integrated into the wings, switchable via remote control module
- Rotating lights (orange LEDs) on the cab, switchable via remote control module

- Front indicators, right and left (orange LEDs), integrated in front bumper, switchable via remote control module
- Rear indicators, right and left (orange LEDs), mounted on bumper, switchable via remote control module
- Small turning circle
- Powerful, high performance motor, trailer load (for example trailer plus two tractors) can be pulled up gradients
- Fully floating front axle with axle pivot steering
- High quality long life lithium polymer POWER rechargeable battery, replaceable
- Range (operating time) with new fully charged battery: approx. 30 minutes
- Charging time (battery in new condition): approx. 90 minutes

The trailer

- Three axle metal low loader trailer with its own radio transceiver technology. Trailer functions can be controlled even when uncoupled from the tractor.
- Trailer featuring two servo motors
- The loading ramps are opened electronically via a servo motor
- Trailer legs can be raised and lowered electronically via a servo motor
- Rear lights (red LEDs) mounted on bumper, switchable via remote control module
- Rear indicators, right and left (orange LEDs), mounted on bumper, switchable via remote control module
- High quality long life lithium polymer rechargeable battery, replaceable
- Range (operating time) with new/fully charged battery: approx. 30 minutes
- Loading time (battery in new condition): approx. 60 to 70 minutes

The remote control module

- Ergonomically designed remote control module for control of SIKU**CONTROL32** radio technology models. Developed in cooperation with the Institute for Ergonomics and Design Research at the University of Essen
- The module is equally suitable for operation by children's and adults' fingers
- Remote control module featuring transceiver technology
- The module is equipped with a scanner function, i.e., it locates its "partner" (= the model) automatically, with no need for selection of channels
- Illuminated ON/OFF switch (SIKU logo)
- Button type controller for control of direction and speed, control of the rear coupling also integrated
- Push button operation of lights and indicators
- Joystick for other functions
- The innovative cross operation concept permits simultaneous control of up to four different functions
- The remote control module pack includes a charger for the SIKU**CONTROL32** rechargeable battery and the SIKU**CONTROL32** POWER rechargeable battery plus the power pack for the charger

The technology

The MAN road truck with low loader is based on a radio technology which utilizes the 2.4 GHz band (ISM band). This radio bandwidth is also used by applications such as Bluetooth and WLAN, and is thus one of the most modern radio technologies currently available on the market. The system's specifications provide it with immunity to the technologies mentioned previously. Interference from mobile phones and Notebooks can thus be excluded. The system functions autonomously in the radio environment assigned to it.

The radio control module and the models are equipped with identical transceiver electronics. The system is thus able to communicate internally, since information can be transmitted from the control unit to the model and vice versa.

This model/control unit "communications capability" is the strength of the system: there is no more need for selection or agreement of channels when a number of people wish to play simultaneously.

The radio communication system is designed in such a way that it is theoretically possible to move any number of vehicles simultaneously. Interference from other radio control modules can be excluded.

The procedure necessary when using the system can be explained using an example:

1. Activating the model. The lights on the model will illuminate, indicating Ready status. The model simultaneously transmits a signal and thus "logs on" to the radio environment.
2. Activation of the remote control module. The module's electronics also "log on" to the radio environment and scan the radio territory available for signals (in this case, activated models). The control system indicates scanning on an LED. The scanning procedure is terminated as soon as the remote control module receives a signal from a model, and the lights on the model start to flash.
3. Selection of model. The operator can now select the model using the remote control module, or scan for another model.

The user can confirm selection by pressing a button on the remote control module if he or she wishes to use the "flashing" model. The remote control and the model now "communicate" on a unique "signature", which is permanently defined for this link automatically. Interference from another remote control unit is thus no longer possible, since this signature will be recognized as "busy" and will be skipped if another remote control unit scans the radio environment.

To select a different model, the user presses the "Next" button on the remote control, and the scanning phase starts again.

The radio band is conceived in such a way that it is theoretically possible to move several million vehicles simultaneously. This theoretical figure indicates that interference from other remote control modules can be excluded.

durch den Druck einer Taste bestätigen. Fernsteuerung und Modell „funken“ nun auf einer eindeutigen Signatur, die sich automatisch für diese Verbindung fest definiert. Eine Störung durch eine andere Fernsteuerung ist somit nicht mehr möglich, da beim scannen des Funkraums mit einer weiteren Fernsteuerung diese Signatur als „besetzt“ erkannt und übergangen wird.

Soll ein anderes Modell ausgewählt werden, wird die „Weiter“-Taste an der Fernsteuerung betätigt und der Scan-Vorgang beginnt erneut.

Das Funkband ist so ausgelegt, dass die theoretische Möglichkeit besteht, mehrere Millionen Fahrzeuge gleichzeitig zu bewegen. Diese theoretische Zahl zeigt, dass eine Störung durch andere Fernsteuermodule ausgeschlossen werden kann.