



MINIATURE HF/VHF ARDF TRANSMITTER

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# MICROFOX 2

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instruction manual

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## INTRODUCTION

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This transmitter was especially designed for training purpose, foxoring competitions, promotion events and other special ARDF events. Transmitting code, keying speed and timing shedule are widely adjustable. Integrated antennas make the installation very easy - just hang it at a tree branch.

Small size and weight, low consumption and price, rugged house and easy operation - these features make this transmitter an ideal device for all competitors or trainers.

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## IMPORTANT!

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**Read carefully this manual before attempting to operate the transmitter.**

**Save this instruction manual.** This instruction manual contains important safety and operating instructions for the MICROFOX2.

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## UNPACKING

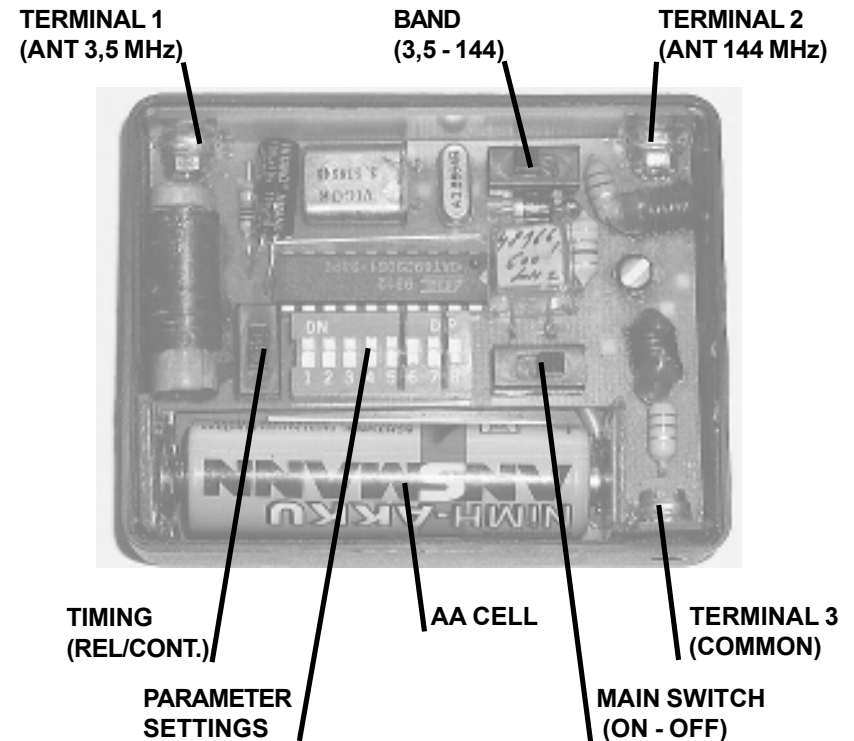
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**Accessories included with the MICROFOX 2:**

- |                                 |       |
|---------------------------------|-------|
| - 3,5 MHz wire antenna          | 2 pcs |
| - 144 MHz/foxoring whip element | 2 pcs |
| - this manual                   |       |

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## 1 TRANSMITTER DESCRIPTION



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## 2 PRECAUTIONS

**Do not let exhausted batteries in the transmitter!** If you do not intend to use the transmitter for a longer period, remove the battery. If the battery leaked out already, remove it immediately, wash the transmitter with a lots of warm water, then dry it thoroughly.

**Do not connect any voltage sources except for the assigned battery to the transmitter!!**

The transmitter contains coils tuned by the winding stretching, which appear to be malformed or bent. Do not attempt to justify it! Pay attention not to distort the coils (there is no danger if the transmitter is closed).

# 3 INSTALLATION

## ■ Unpacking

After unpacking, check carefully the transmitter and all accessories included. In the case of any damage do not use the transmitter and contact immediately the manufacturer.

## ■ Before operating

Insert one AA cell (accumulator or alkaline cell) to the battery holder.

## ■ Parameter settings

Open the transmitter house. Parameters (transmitted code, keying speed and timing schedule) are to be set by DIP switch according to the following table:

TRANSMITTER PARAMETERS SETTING (1=ON, 0=OFF)																	
code	1	2	3	4	5	code	1	2	3	4	5	code	1	2	3	4	5
A	0	0	0	0	0	N	1	0	1	1	0	MOE	0	1	0	1	1
B	1	0	0	0	0	O	0	1	1	1	0	MOI	1	1	0	1	1
C	0	1	0	0	0	P	1	1	1	1	0	MOS	0	0	1	1	1
D	1	1	0	0	0	Q	0	0	0	0	1	MOH	1	0	1	1	1
E	0	0	1	0	0	R	1	0	0	0	1	MO5	0	1	1	1	1
F	1	0	1	0	0	S	0	1	0	0	1	MO	1	1	1	1	1
G	0	1	1	0	0	T	1	1	0	0	1	speed	6 7				
H	1	1	1	0	0	U	0	0	1	0	1	100	0 0				
I	0	0	0	1	0	V	1	0	1	0	1	70	1 0				
J	1	0	0	1	0	W	0	1	1	0	1	50	0 1				
K	0	1	0	1	0	X	1	1	1	0	1	35	1 1				
L	1	1	0	1	0	Y	0	0	0	1	1	timing	8				
M	0	0	1	1	0	Z	1	0	0	1	1	5 min	0				
												2,5 min	1				

This table can be found also on the inner side of the transmitter cover.

## ■ Clock start

The transmitter is to be started at the beginning of the transmitting period by turning on (ON/OFF switch). Before this, you must set the timing (DIP switch 8) and select operation mode (CONT/REL). Other parameters (band, code, keying speed) can be set any time, even while transmitting.

## ■ Transmitter installation at 3,5 MHz

Insert the antenna wires to the terminals 1 and 2. Unfold the antenna (both wires) and hang the transmitter so that the end of lower wire is close to the ground. The whole radiator should be in free space (especially during the rain). With the antenna installed as this, the transmitter will be audible from the distance over 1 km.

Note: It does not matter, which wire will be up, only they should be unfolded vertically in the full length.



## ■ Transmitter installation for foxoring

Insert one of the whip elements to the terminal 1. Stand the transmitter on the ground, so that the whip aims vertically up. Now the transmitter is audible from the distance up to 50 - 100 m.



## ■ Transmitter installation at 144 MHz

Insert the whip elements to the terminals 2 and 3. Mount the transmitter on the tree branch about 2 meters above the ground so that the elements lay horizontally and in the right angle to the direction to the start.



## 4 MAINTENANCE

Keep the transmitter dry and clean. If the transmitter becomes wet, dry it by the clean cloth open it and let it dry in a room temperature. **Never** use strong heaters! If the transmitter becomes dusty or dirty, clean it with a brush or a dry, soft cloth. **Avoid** the use of strong chemical solvents such as benzine or alcohol to clean the transmitter.

The transmitter needs no maintenance above the mentioned procedures.

## 5 TROUBLESHOOTING

The following list is designed to help you correct problems which are not equipment malfunctions. If you are unable to locate the cause of a problem or solve it through the use of this list, contact the manufacturer.

### ■ The transmitter is not audible

**Possible cause:** the transmitter is switched to another band or it is out of the transmitting period

**Solution:** check for the transmitter settings and start

**Possible cause:** battery is exhausted or upside down in the holder

**Solution:** check or replace the battery

### ■ The transmitter is very weak

**Possible cause:** antenna wires or elements are out of the terminals or in uncorrect terminals

**Solution:** check the antenna wire or elements

## 6 WARRANTY, SERVICE

Should this equipment malfunction under normal use, it will be repaired without charge for a period of one year from the date of purchase.

The customer shall not have any claim under this warranty for repair or adjustment expenses if the trouble is caused by improper, rough or careless treatment or mechanical damage, by a fire or other natural calamity or by improper repair or adjustment made by anyone other than manufacturer.

Any other information, service or modifications are provided by the manufacturer:

**Jiří Mareček, OK2BWN, Obřanská 593, CZ-664 01 Bílovice nad Svitavou  
phone/fax +420 545227041, e-mail: marecek@sky.cz**

## 7 SPECIFICATIONS

### ■ GENERAL:

Supply 1 AA cell

Operating period (alkaline cell or NiMH accumulator 1800 mAh)

Band	3,5 MHz	3,5 MHz foxoring	144 MHz
continuously	10 hours	20 hours	20 hours
in relations	25 hours	40 hours	40 hours

Operating temperature range -10...+ 60°C

Storage temperature range -20...+ 60°C

Covering IP53

Dimensions 57 (W) x 73(H) x 22 (D) mm

Weight 50 g (without battery)

### ■ 3,5 MHz TRANSMITTER:

Carrier frequency crystal controlled (3,52 ... 3,66 MHz)

Modulation CW

Output RF power 50 mW

Antenna wire 2 x 1,2 m (audible over 1 km),  
or whip 0,5 m (foxoring, audible up to 50m)

### ■ 144 MHz TRANSMITTER:

Carrier frequency crystal controlled (144,5 ... 145,5 MHz)

Modulation AM 75%, keyed carrier

Output RF power 20 mW

Antenna single halfwave dipole

### ■ LOGIC UNIT:

Transmitted codes: MOE, MOI, MOS, MOH, MO5, MO, A ... Z

Keying speed: 35,50,70 or 100 PARIS

Time schedules: 60 s transmit/240 s space, 30 s transmit/120 s space,  
continuous operation

Time base stability: +-20 ppm (approx 2 s/day)



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