

Digitaler Funk-A/V-Empfänger DF110RXW im wetterfesten Gehäuse

Bedienungsanleitung

1. Einleitung

Bitte lesen Sie diese Bedienungsanleitung vollständig und sorgfältig durch. Die Bedienungsanleitung gehört zu diesem Produkt und enthält wichtige Hinweise zur Inbetriebnahme und Handhabung.

Beachten Sie immer alle Sicherheitshinweise. Sollten Sie Fragen haben oder unsicher in Bezug auf die Handhabung der Geräte sein, dann holen Sie den Rat eines Fachmannes ein. Bewahren Sie diese Anleitung bitte sorgfältig auf und geben Sie sie ggf. an Dritte weiter.

2. Bestimmungsgemäße Verwendung

Der Empfänger DF110RX im wetterfesten Gehäuse dient zum Empfang von digitalen Video- und Audio-Signalen (per Funk im 2,4 GHz Frequenzband) von kompatiblen Sendern (DF110TX oder DF110TXW) und wandelt die Signale wieder in die ursprünglichen analogen Signale zurück.

Die Funkübertragung erfolgt auf digitaler Basis auf immer wechselnden Frequenzen (Frequenzhopping), die zwischen Sender und Empfänger synchronisiert sind. Nur der Empfänger, der mit dem Sender "gepaart" ist, kann die synchronisierten Signale empfangen. Hierdurch ist eine Abhörsicherheit gegeben.

Zwei Paare Sender und Empfänger können auch miteinander verkettet werden, um die Übertragungsstrecke zu erweitern.

Die typische Reichweite der Funkübertragung im Freien beträgt ca. 100 m (bzw. bei optimaler Bedienung bis zu 200 m) bei Sichtkontakt zwischen Sender und Empfänger. In Gebäuden ist die Reichweite durch Wände und Decken (insbesondere aus Metall oder Stahlbeton) deutlich geringer (max. bis zu ca. 20 m).

Die Stromversorgung des Empfängers DF110RX erfolgt über das eingebaute Netzgerät, angeschlossen am Netzstrom 230V~AC, 50Hz. Der Empfänger kann im Außenbereich verwendet werden (IP 54) und ist für den Betrieb in privaten Haushalten konzipiert.

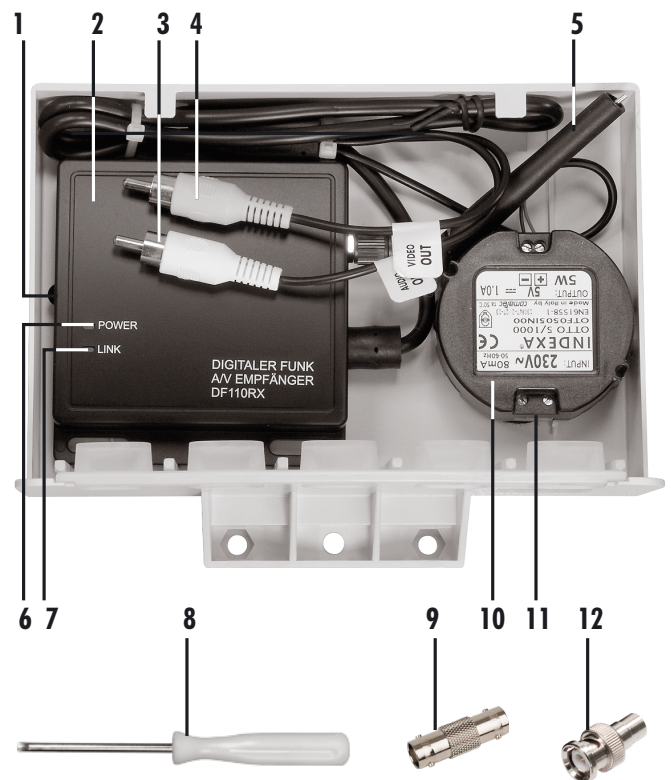
Jede andere Verwendung oder Veränderung des Gerätes gilt als nicht bestimmungsgemäß und birgt erhebliche Unfallgefahren. Der Hersteller haftet nicht für Schäden, die durch nicht bestimmungsgemäßen Gebrauch oder falsche Bedienung verursacht werden.

Dieses Gerät ist nicht dafür bestimmt, durch Personen (einschließlich Kinder) mit eingeschränkten physischen, sensorischen oder geistigen Fähigkeiten oder mangels Erfahrung und/oder mangels Wissen benutzt zu werden, es sei denn, sie werden durch eine für ihre Sicherheit zuständige Person beaufsichtigt oder erhielten von ihr Anweisungen, wie das Gerät zu benutzen ist. Kinder müssen beaufsichtigt werden, um sicherzustellen, dass sie nicht mit dem Gerät spielen.

3. Lieferumfang

- Empfänger DF110RX mit Anschlusskabeln im wetterfesten Gehäuse mit eingebautem Netzgerät und eingebauter Rundstrahlantenne 3 dB
- 2 Adapter
- Masthalterung inkl. Befestigungsmaterial
- Schraubendreher für Netzkabelanschlussklemmen
- Bedienungsanleitung

4. Ausstattung



- | | | | |
|---|------------------------|----|--------------------------------------|
| 1 | "Pairing"-Taste | 8 | Schraubendreher |
| 2 | Empfänger | 9 | Adapter |
| 3 | Audio-Ausgang | 10 | eingebautes Netzgerät |
| 4 | Video-Ausgang | 11 | Anschlussklemmen für Stromversorgung |
| 5 | 3 dB Rundstrahlantenne | 12 | Adapter |
| 6 | Power-LED | | |
| 7 | Verbindungs-LED | | |

5. Technische Daten

Betriebsspannung	5 V \equiv DC (über eingebautes Netzgerät)
Stromaufnahme	300 mA
Modulation	BPSK, QPSK, 16-QAM
Videopegel	1 Vp-p/75 Ohm
Audiopegel Mono	1 Vp-p/600 Ohm
max. Bildauflösung (Pixel)	720 x 576 D1
Bildübertragungsrate	25 Bilder/Sekunde (max.)
Funk-Reichweite (max.)	100-200 m bei freier Sicht
Schutzklasse	IP 54
Betriebstemperatur	-10° C bis + 50° C
Abmessungen ohne Antenne	178 x 134 x 70 (mm)

Eingebautes Netzgerät

Betriebsspannung	230 V \sim 50 Hz
Ausgangsspannung	5 V \equiv DC, 1 A

6. Sicherheitshinweise

Die folgenden Hinweise dienen Ihrer Sicherheit und Zufriedenheit beim Betrieb des Gerätes.

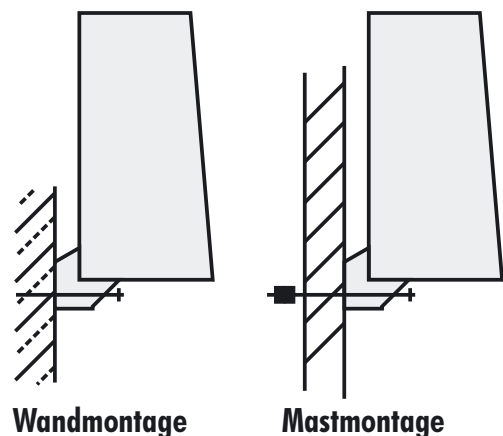
- ⚠ Gefahr!** Bei Nichtbeachtung dieser Hinweise werden Leben, Gesundheit und Sachwerte gefährdet.
- Lassen Sie Kleinkinder nicht unbeaufsichtigt mit dem Gerät, Verpackungsmaterial oder Kleinteilen! Andernfalls droht Lebensgefahr durch Erstickten!
- Behandeln Sie die Zuleitungen vorsichtig! Verlegen Sie diese so, dass sie nicht beschädigt werden können und keine Stolpergefahr darstellen. Ziehen Sie die Kabel nicht über scharfe Kanten, und quetschen oder klemmen Sie sie nicht anderweitig ein. Andernfalls drohen Lebens- und Verletzungsgefahr!
- Vergewissern Sie sich vor dem Netzstromanschluss des Gerätes, dass der Netzstrom vorschriftsmäßig mit 230 V \sim AC, 50 Hz und mit einer vorschriftsmäßigen Sicherung ausgestattet ist.
- Setzen Sie das Gerät nicht der Nähe von Feuer, Hitze oder lang andauernder hoher Temperatureinwirkung aus!
- Schützen Sie das Gerät vor starken mechanischen Beanspruchungen und Erschütterungen!
- Schützen Sie das Gerät vor starken magnetischen oder elektrischen Feldern!
- Verwenden Sie das Gerät nur mit den gelieferten Originalteilen oder Originalzubehör!
- Überprüfen Sie vor dem Zusammenbau und der Inbetriebnahme die Lieferung auf Beschädigungen und Vollständigkeit!
- Ziehen Sie bei längerem Nichtbenutzen des Gerätes immer den Netzstecker aus der Netzsteckdose.
- Schließen Sie kein beschädigtes Gerät (z.B. Transportschaden) an. Fragen Sie im Zweifelsfall Ihren Kundendienst. Reparaturen und Eingriffe an den Geräten dürfen nur von Fachkräften durchgeführt werden.

- Bei Verwendung von Ohrhörern und Kopfhörern kann übermäßiger Schalldruck den Verlust des Hörsinns verursachen.

7. Platzierung

Achten Sie auf folgende Punkte:

- Die typische Reichweite der Funkübertragung beträgt ca. 100 m (bzw. bei optimaler Bedienung bis zu 200 m) bei Sichtkontakt zwischen Sender und Empfänger. In Gebäuden ist die Reichweite deutlich geringer (max. bis zu ca. 20 m). Wände, Decken, Türen, Metallflächen, z.B. Kühlschränke, Blechregale und bedampfte Spiegel sowie Wassermengen schirmen auch die Funkübertragung ab.
- Ist keine gute Funkverbindung direkt zwischen dem Quellgerät und dem Standort des Wiedergabegerätes vorhanden, dann optimieren Sie die Position der Geräte sowie die Ausrichtung der Antennen. Ist dennoch keine gute Verbindung vorhanden, können die Kabel zwischen Quellgerät und Sender und/oder zwischen Empfänger und Wiedergabegerät verlängert werden. Verwenden Sie hierzu ein A/V-Verlängerungskabel bzw. bei Videoüberwachung ein RG59/75 Ohm-Kabel mit entsprechenden BNC-Verbindungen (siehe Kapitel "Optionales Zubehör").
- Die Funkübertragung kann durch starke elektrische Felder und andere Funkgeräte beeinträchtigt werden. Achten Sie auf ausreichende Entfernung zu: Mikrowellenherden, Funktelefonen, Handys, Funk-Geräten im 2,4 GHz Bereich, z.B. WLAN (Router / Computer), elektrischen Motoren und Starkstromleitungen.
- Der Sender kann an einer Wand oder an einem Mast befestigt werden. Das obere Gehäuseteil muss nach oben zeigen (dh. die Montagelöcher sind unten). **Wandmontage:** befestigen Sie den Sender mit passenden Schrauben und Dübeln durch die unteren Montagelöcher. **Mastmontage:** verwenden Sie die mitgelieferten Schrauben und Montageschellen. Der Sender muss mindestens 1m über dem Boden angebracht werden (bessere Empfangsbedingungen). Achten sie auf ausreichende Entfernung von Metallflächen oder Stahlbeton, da diese die Funkübertragung negativ beeinflussen.



- Achten Sie darauf, dass der Standort des Gerätes möglichst staub- und vibrationsfrei ist, und dass eine gute Luftzirkulation gegeben ist.
- Achten Sie darauf, dass sich in der Nähe eine Netzsteckdose befindet.


8. Anschluss

- Ziehen Sie das obere Gehäuseteil vom unteren Gehäuseteil ab.
- Verbinden Sie den Video-Ausgang [4] mit dem Video-Eingang des Monitors/Recorders. Verwenden Sie ggf. den Adapter [9].
- Verbinden Sie ggf. den Audio-Ausgang [3] mit dem Audio-Eingang des Monitors/Recorders.
- Verbinden Sie 230 V direkt mit dem im Gehäuse eingebauten Netzgerät [10] und zwar seitlich über die äußeren grünen Klemmen [11] (Markierung: 230 V - Lösen Sie hierzu das Netzgerät von der Kletthalterung). Verwenden Sie den mitgelieferten Schraubendreher [8], um die Klemmen (durch die zwei Löcher an der Oberseite des Netzgerätes) festzuziehen. Befestigen Sie das Netzgerät wieder fest im Gehäuse.
- Stecken Sie den Netzstecker des Netzanschlusses in eine geeignete Netzsteckdose. Die Power-LED [6] und die Verbindungs-LED [7] leuchten auf, die Verbindungs-LED erlischt jedoch nach ca. 3 Sekunden wieder.
- Nach dem Verbindungsaufbau und der Inbetriebnahme (s. folgendes Kapitel) setzen Sie das obere Gehäuseteil wieder auf das untere.

9. Verbindungsaufbau (Pairing) und Inbetriebnahme

Der Sender und der Empfänger müssen miteinander gepaart sein, um eine Funkverbindung aufbauen zu können.

Nehmen Sie den Verbindungsaufbau wie folgt vor:

- Nach dem Anschluss der Stromversorgung ist der Empfänger in Betrieb.
- Nehmen Sie auch Ihren Sender in Betrieb.
- Schalten Sie Ihr Quell- und Ihr Wiedergabegerät ein.
- Wählen Sie am Empfangs-Fernseher den entsprechenden AV-Kanal (bei manchen Fernsehgeräten auch als VCR, Kanal 0 oder mit dem Symbol  bezeichnet). Ist ein Receiver über einen Videorecorder angeschlossen, wählen Sie dessen AV-Kanal ebenfalls aus. Sie sehen nun das Bild und hören ggf. auch den Ton.
- Halten Sie die "Pairing"-Taste [1] am Empfänger so lange gedrückt, bis die Verbindungs-LED [7] blinkt. Auf dem am Empfänger angeschlossenen Bildschirm erscheint: "Please press pairing button of TX device" sowie die Anzeige von 60 Sekunden, die bis 0 Sekunden zählt.
- Innerhalb dieser 60 Sekunden haben Sie Zeit, die Verbindung vorzunehmen: Halten Sie die "Pairing"-Taste am Sender so lange gedrückt, bis auch die Verbindungs-LED am Sender blinkt. Bei

erfolgreichem Verbindungsaufbau erscheint "Pairing OK save data" auf dem Bildschirm. Nach ca. 10 Sekunden erlischt die Bildschirmanzeige, die Verbindungs-LEDs an Sender und Empfänger [2] leuchten grün und das Bild des Quellgerätes erscheint auf dem Bildschirm.

Hinweise:

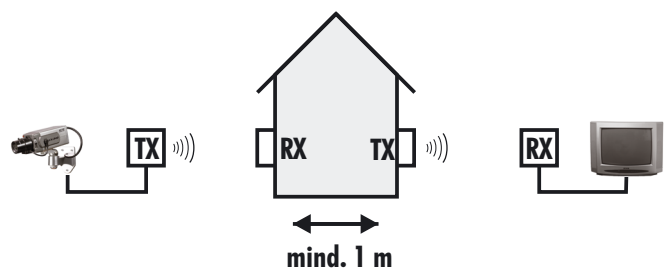
- Ist die Wiedergabe des Videosignals nicht flüssig, ändern Sie den Standort von Sender und Empfänger bzw. verringern Sie deren Abstand zueinander.
- Um die Empfangsqualität zu ermitteln, ziehen Sie den Netzstecker des Empfängers kurz aus der Netzsteckdose und stecken es dann wieder ein. Wenn das Bild auf dem Wiedergabegerät erscheint, ist oben rechts auf dem Bildschirm für ca. 10 Sekunden die Empfangsqualität als Balken-symbol-Anzeige zu sehen (4 Balken bedeuten optimaler Empfang).

10. Funkreichweite

Die Reichweite der Funk-Übertragung ist abhängig von vielen verschiedenen Faktoren. Im Idealfall können bei freier Sicht (zwischen den Antennen) bis zu 100 m erreichbar sein, in Gebäuden dagegen nur noch bis zu max. 20 m. Eine Garantie für diese Reichweite ist jedoch nicht möglich, da die örtlichen Gegebenheiten am Aufstellungsort diese negativ beeinflussen können. Eine Verschlechterung der Reichweite ist z.B. zu erwarten durch folgende Einflüsse:

- Wände und Decken, insbesondere solche aus Metall, Stahlbeton oder massivem Stein
- Beschichtete Fenster (z.B. Energiespar-Fenster), Heizkörper, Spiegel, Metallflächen, Türen
- Elektrische Leitungen und elektrische Geräte (z.B. Elektromotor, Mikrowellenherd)
- Geräte auf der gleichen oder benachbarten Funk-Frequenz (z.B. ein WLAN-System)

11. Verkettung zweier TX/RX-Sets (Repeater)



- Werden zwei Sets verkettet, so müssen die Geräte wie im Kapitel 7 beschrieben platziert werden. Die mit Kabel verbundenen Empfänger und Sender müssen mit mindestens 1m Abstand platziert werden, um Störungen zu vermeiden.

- Um die Geräte direkt miteinander zu verbinden, verbinden Sie den Audio-Eingang des Senders mit dem Audio-Ausgang [3] des Empfängers sowie den Video-Eingang des Senders mit dem Video-Ausgang [4] des Empfängers mit Hilfe des Adapters [12]. Die Verbindungskabel dürfen bis zu 100 m verlängert werden, verwenden Sie hierzu ein RG59/75 Ohm Kabel
- Während des Verbindungsaufbaus benötigen Sie einen Monitor, der am "mittleren" Empfänger angeschlossen ist.
- Während des Betriebs wird die Kanal- sowie Signal-Empfangsstärke für beide Funkstrecken hintereinander angezeigt.
- Im Repeatermodus werden die Bilder zweimal komprimiert. Hierdurch wird die Bildübertragungsrate reduziert und die Übertragung weiter verzögert.

12. Wartung und Reinigung

- Das Gerät ist wartungsfrei: Öffnen Sie es deshalb niemals.
- Überprüfen Sie regelmäßig die technische Sicherheit und die Funktion.
- Ziehen Sie vor der Reinigung das Netzgerät aus der Steckdose.

- Äußerlich darf das Gerät nur mit einem weichen, nebelfeuchten Tuch oder Pinsel gereinigt werden.

13. Entsorgung



Entsorgen Sie Verpackungsmaterial und ausgediente Geräte nicht im Hausmüll, führen Sie sie der Wiederverwertung zu. Den zuständigen Recyclinghof bzw. die nächste Sammelstelle erfragen Sie bei Ihrer Gemeinde.

14. Vereinfachte EU-Konformitätserklärung



Hiermit erklärt INDEXA GmbH, dass der Funkanlagentyp DF110RXW der Richtlinie 1995/5/EG entspricht. Der vollständige Text der EU-Konformitätserklärung ist unter der folgenden Internetadresse verfügbar: http://www.indexa.de/w2/f_CE.htm.

Indexa GmbH, Paul-Böhringer-Str. 3, 74229 Oedheim, Deutschland
www.indexa.de 2021/03/04 Änderungen vorbehalten

15. Fehlersuche

Fehler	Mögliche Ursache	Behebung
Anzeige "NO SIGNAL"	Sender bzw. Quellgerät wird nicht mit Strom versorgt	Überprüfen Sie die Stromversorgung der Geräte.
	Keine Verbindung der A/V Kabel	Kontrollieren Sie die Verbindung der A/V-Kabel
	Es wurde noch kein Verbindungsaufbau durchgeführt	Beachten Sie das Kapitel 9
	Der Sender befindet sich außer Reichweite	Verringern Sie den Abstand zwischen Sender und Empfänger
	Verbindung wurde durch Objekte unterbrochen	Entfernen Sie größere Objekte (insbesondere metallische Objekte) bzw. ändern Sie die Platzierung des Senders und/oder Empfänger
Instabiler Signal-Empfang	Antennen nicht optimal zueinander ausgerichtet	Richten Sie die Antennen durch Ausprobieren optimal zueinander aus
	Empfänger und Sender zu weit auseinander	Verringern Sie den Abstand zwischen Sender und Empfänger
	Signal wurde blockiert	Entfernen Sie größere insbesondere metallische Objekte bzw. ändern Sie die Platzierung des Senders und/oder Empfänger
	Signal wurde gestört	Stellen Sie sicher, dass sich keine Störquellen in der Nähe des Senders bzw. des Empfängers befinden, z.B. WLAN Router, Elektrogeräte, Mikrowellenherde
Störungen im Bild	Sender und Empfänger stehen zu nahe aneinander	Platzieren Sie Sender und Empfänger mit einem Abstand von mind. 2 m

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