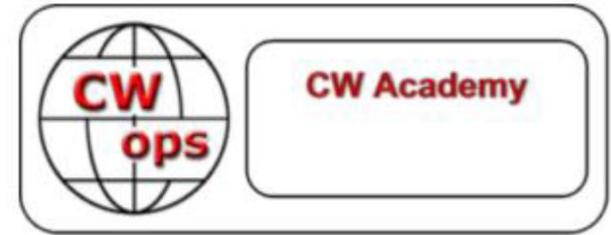




Internationale Amateurfunk-Ausstellung
27. - 29. Juni 2025

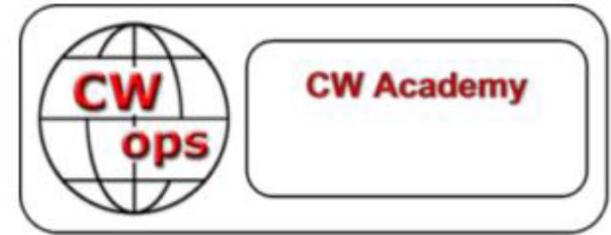


CW online lernen



15.07.2025

DF2OF, DK1WB, DK3WW, DL1RS, DL7UGN, HB9GVC, DL8TG, DM6BU, DM6EE



CW online lernen

Erfahrungsaustausch und Treffen

- CW Online Lernen – geht das?
- Wer möchte CW Lernen?
- Wer hat Interesse anderen die Kunst des Morsens zu lehren?
- Vorstellung CW Academy Ansatz
- Erfahrungsaustausch!!!

CW Academy



- Seit 2011 Erfahrungen mit CW Online Kursen
- Jedes Jahr eine 4-stellige Anzahl an Studenten
- International: Englisch, Japanisch, Griechisch und jetzt auch in Deutsch!!

Beginner

Practice & Homework Assignments – Online
Practice & Homework Assignments – JAPAN
Practice & Homework Assignments – GREEK
Practice & Homework Assignments – GERMAN

Fundamental

Practice & Homework Assignments – Online
Practice & Homework Assignments 2.0 New- Online
Practice & Homework Assignments – GERMAN
Practice Files

Intermediate

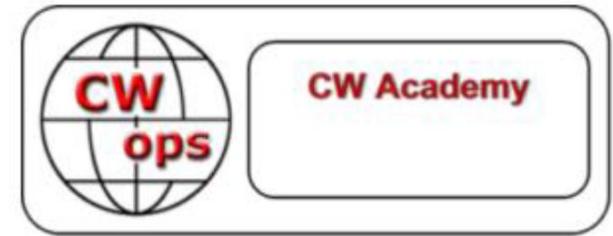
Practice & Homework Assignments – Online
Practice & Homework Assignments 2.0 New – Online
Practice & Homework Assignments 2.1 New – Online
Practice & Homework Assignments – GERMAN
Practice & Homework Assignments – GREEK
Practice Files

Advanced

Practice & Homework Assignments – Online
Practice & Homework Assignments 2.0 New – Online
Practice & Homework Assignments 2.1 New – Online
Practice & Homework Assignments – GERMAN
Practice Files

[Additional Info & Practice Material for Students](#)

Advisor



A screenshot of a Zoom meeting. On the left is a sidebar with a list of participants: DM6EE, Lutz; Mike DL7UGN; Matthias DF2OF; Hans, DK1WB; HB9GVC Thomas; Klaus, DL8TG; Mike DL7UGN; and Uwe, DK3WW. The main window shows a presentation slide titled 'CW online lernen - CWA' with the CW ops and CW Academy logos. The slide features three images of electronic equipment: a red component on a circular base, a gold-colored component on a black base, and a wooden-based component with a handle. At the bottom of the slide, it says 'Juli 2024' and 'DK1WB, DL7UGN, HB9GVC, DL8TG, DM6EE, DF2OF, DK3WW'. The Zoom interface at the bottom shows a 'Folie 1' indicator and a 100% zoom level.

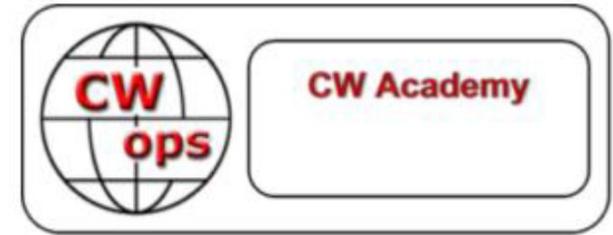
Kurzvorstellung Advisor



- HB9GVC, Thomas
 - QRV seit 2017
 - Schwerpunkte: Betrieb von 80m – QO100, Selbstbau Antennen, Geräte etc. und SOTA
- DK3WW, Uwe, Jahrgang 1958
 - QRV seit 1980 unter verschiedenen Rufzeichen
 - Schwerpunkte Contesting, CW, DXing, Antennenbau
 - Mitglied in einigen CW Clubs



Kurzvorstellung Advisor



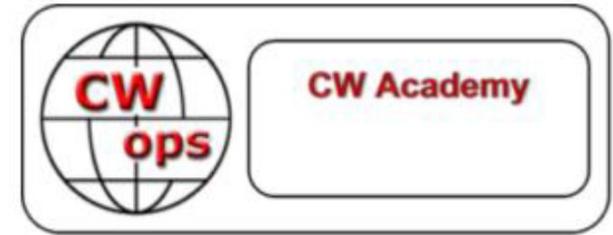
- DK1WB, Hans
 - QRV seit 1967
 - DX, CW Notfunk



- DL7UGN, Mike
 - QRV seit 1985
 - CW, Conteste, Klartext-QSOs



Kurzvorstellung Advisor

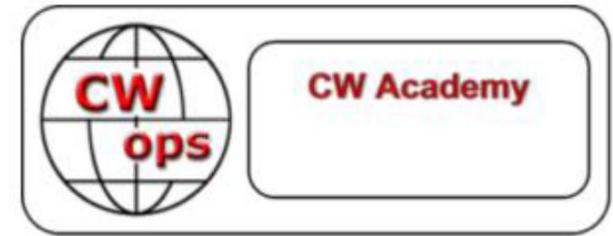


➤ DF2OF, Matthias

- Lizenz seit 1977
- Schwerpunkte: CW, QRQ Klön QSO, GMA, Selbstbau, QRP, QO-100



Kurzvorstellung Advisor



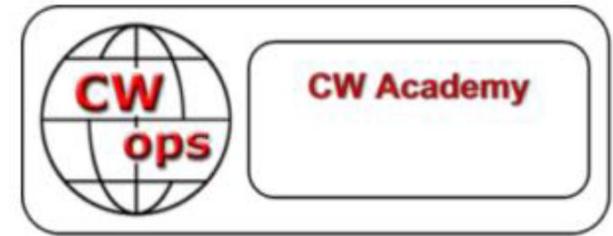
- DM6BU, Markus
 - QRV seit 2022
 - CW, SOTA/POTA, QO-100



- DL1RS, Ralf
 - QRV seit 1995
 - CW, Conteste, POTA



Kurzvorstellung Advisor



➤ DL8TG

- Lizenz seit 1966
- Schwerpunkte CW, QRP, Conteste

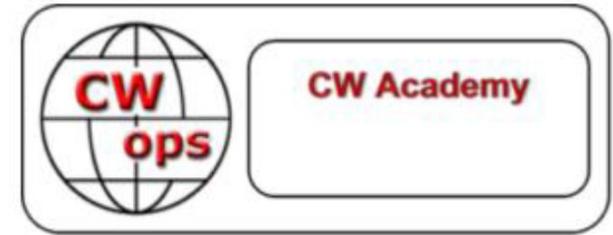


➤ DM6EE

- Lizenz seit 1981
- Schwerpunkte CW, QRP, Conteste



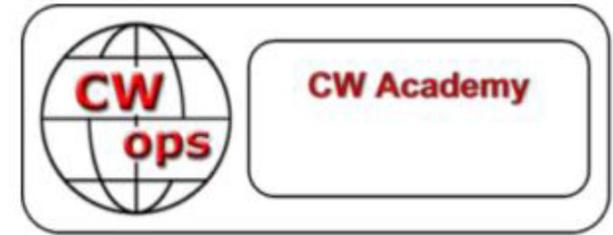
Voraussetzungen



- **Jede Tag durchschnittlich 1 Stunde individuelles Training!!**
- Wir sind mehr Mentor als intensiver „Lehrer“ – Unterstützung bei Problemen, Tools, Fragen!
- Tool: wir haben uns für treff.darc.de entschieden
- Morsegenerator (Morserino, TRX mit Abschlusswiderstand, ...)
- Taste, am besten elektronisch mit Single oder Squeeze
- Ton des Generators muss in die Online-Session (Mikrofon, ...)



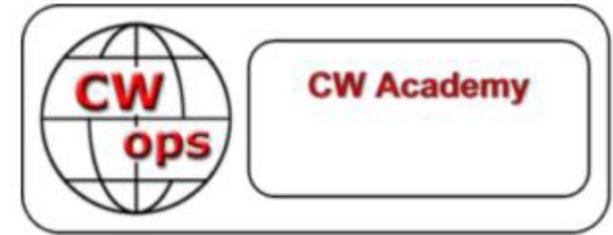
Voraussetzungen



- Bluetoothbox mit Mikrofon zum Beispiel
- Morserino
- Morsetutor, bei Matthias, DF2OF, begrenzt Bausätze verfügbar (<https://github.com/bhall66/morse-tutor>)
- QCX/QMX von Hans Summer (mit Dummyload), man hat gleich einen Transceiver!



Teilnehmerurkunde



CW Academy Certificate of Completion

Klaus-Dieter Hanschmann – DL8TG

has successfully completed
Fundamental
an 8-week/16-session training program
in Morse Code sending and receiving

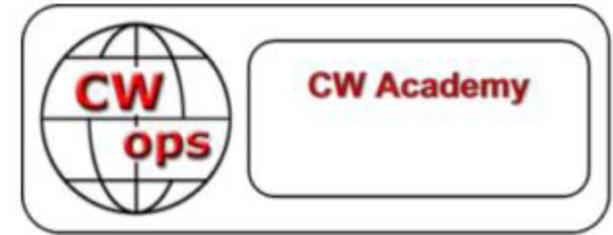
R Carter
Bob Carter – WR7Q
CW Academy Advisor



Sep/Oct 2023

Roland K Smith
R Carter
Roland K Smith – K7OJL
Bob Carter – WR7Q
CW Academy Managers

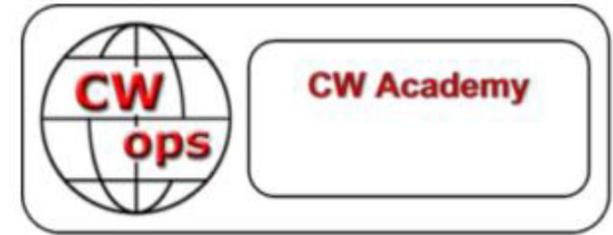
Ziele Beginner



- **Erlernen aller Buchstaben, Zahlen und einiger weniger Sonderzeichen (/ - ?)**
- **25 WPM Zeichengeschwindigkeit, 6 WPM Reale Geschwindigkeit**
- **Abkürzungen, Rufzeichen, Wörter**
- **Am Wichtigsten: Motivation!!!**
- **On Air?**



Ziele Fundamental



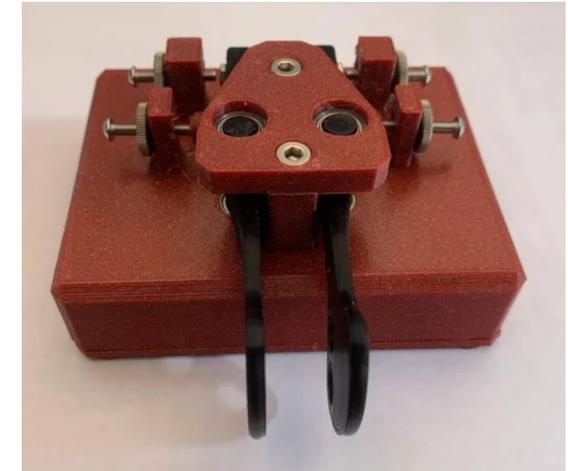
- **Sicheres Aufnehmen von Morsezeichen mit 12 WPM bei einer Zeichengeschwindigkeit von 25 WPM**
- **Praktische Fertigkeiten für Standard-QSOs**
- **Ablauf und Übung Contest QSOs**
- **Üben und Festigung Gehörlesen und sofortige Zeichenerkennung (ICR)**
- **Erfahrungsaustausch untereinander, praktische Tipps**



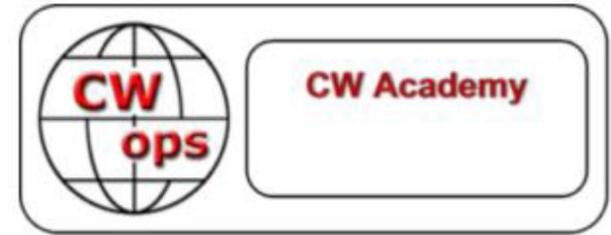
Ziele Intermediate



- **Sicheres Aufnehmen von Morsezeichen mit 20 WPM bei einer Zeichengeschwindigkeit von 25 WPM**
- **Praktische Fertigkeiten für Standard-QSOs**
- **Ablauf und Übung Contest QSOs**
- **Klartext hören: Wörter, Phrasen (viel Englisch)**
- **On Air Übungen: Contest, Klartext**
- **Erfahrungsaustausch untereinander, praktische Tipps**



Übungsprotokoll



- Jeden Tag soll ein kurzes Übungsprotokoll geführt werden
- Jeden Sonntag/Montag 18:00 per Mail an die Advisor

Anhang G: Tägliches CW-Praxisprotokoll

CWops-Klasse: _____

Name des Schülers: _____

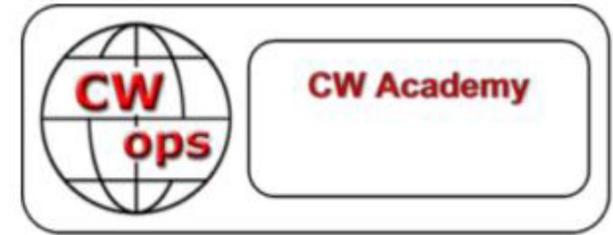
DATUM	ZEIT	SESSION	AUFGEWANDTE ZEIT	ANMERKUNGEN

Kurse ab September



- Je nach Anmeldezahlen werden wir Beginner, Fundamental und Intermediate Kurse anbieten.
- Anzahl der Teilnehmer pro Kurs maximal 10!!!
- Kurse je nach Advisor Sonntag/Donnerstag 20 Uhr oder Montag/Donnerstag 20 Uhr auf treff.darc.de
- Bitte bis Anfang August anmelden!!

Anmeldung



- Die Anmeldung erfolgt durch den Teilnehmer hier:
- <https://cwa.cwops.org/cwa-student-portal-information/>
- **Student Portal Information**

The CW Academy Student Portal is where students can sign up for classes and manage their student information. Capabilities available on the Student Portal include:

Sign Up for a Class

Check Student Status

Update Signup Information

Take a Morse Code Practice Assessment

Along with other actions during the semester

Click Setup Username and Password if you are a new student.

CW Academy requires a username and password to access the Student Portal.

Anmeldung



➤ Link zur Registrierung:
<https://cwa.cwops.org/register>

➤ CW Academy

INSTRUCTIONS!

Your Username **MUST** be your Amateur Radio Callsign **OR** if you do not have a callsign, please use your last name as your Username

- **DO NOT** use an email address or some combination of your name! This is necessary to allow the system to properly link your information in the CW Academy database with your username
- Be certain to select the appropriate role: either a **Student** or an **Advisor**
- You will receive an email with a link to verify your username and password which will then allow you to log into the website
- At that time you must sign up for a class. **Creating a username and password DOES NOT sign you up for a class!** If you do not sign up within the next seven days your username will be deleted

Username *

First name

Last name

Email *

Password *

Select Role *

Student ▼

Select your user role

Register

CW ACADEMY

Guiding Better CW Operators

CWA - POST REGISTRATION

Registration complete. We have sent you an email with a verification link.

New User Registration

You have entered your user information. An email has been sent to your email address with a verification link. You must click on that link in order to complete your registration.

The email also has your username and password. CW Academy suggests that you keep this email for future reference.

Welcome to CW Academy!

Welcome to CW Academy

Hello L G DN6EEE, and welcome to CW Academy. We're thrilled to have you on board.

Please verify your registration: https://cwa.cwops.org/register/?user_id=1254&verification_key=884ce4bb05d328ecb03c598409e2b1686056f127dd28

For reference, here's your login information:

Username: DN6EEE

Login page: <https://cwa.cwops.org/log-in/>

Anmeldung



CW ACADEMY

Guiding Better CW Operators

LOG IN

If you get a message below that you are already logged in, click [HERE](#) to access your portal.

Thank you for verifying your account. You can now login.

Username *

Password *

Remember me

Login

Don't have an account? [Signup Now »](#)

[Lost your password?](#)

CW ACADEMY

Guiding Better CW Operators

CWA - STUDENT REGISTRATION

Student Registration V11

Welcome to the CW Academy where our mission is to increase the number of competent CW operators on the amateur radio bands and our goal is to guide you to becoming a better CW operator as you increase your CW skills, speed, and activity!

Sign-up You should now sign up as a student for an upcoming semester Sign-Up	Check SignupStatus You have already signed up and want to check the status of your registration Check Status	Practice Assessment If you want to take a practice Morse Code Proficiency Assessment, click the 'Practice Assessment' button below. You are allowed to take a practice Morse Code Proficiency Assessment twice in a 45-day period. Practice Assessment
---	---	---

V11. Prepared at 2024-03-28 13:26:33

Report pass 1 took 0.0009 seconds to run

CW Academy
CW ACADEMY
Guiding Better CW Operators

PROGRAM LIST

Student Portal for DN6EEE

Reminders and Actions Requested 28-Mar-24 @ 13:25 UTC

Date Created

IMPORTANT! You have obtained a username and password. You must next sign up for a class. If you do not sign up, your username will be deleted.

Student Programs

Student Sign up

Use this program to sign up for a CW Academy Class or to modify your signup details.

Check Student Status

The program displays the current status of your CW Academy class request.

[Display Recent Reminders](#) Displays recent reminders starting with the most recent reminder. Displays 25 at a time

Student Resources

Use this link to access the curriculum and various practice files. This information is hosted on cwops.org.

Anmeldung



Signup Information

CW Academy offers four levels of classes based upon operator CW proficiency: Beginner, Fundamental, Intermediate or Advanced.

- The Beginner level, as the name implies, is for people who have little or no Morse code knowledge. Choose the Beginner class if that is your situation
- The Fundamental class is for people who have learned the Morse code characters and are capable of sending and receiving CW at about 6 words per minute and wish to increase that capability to about 12 words per minute
- The Intermediate class is for people who are capable of sending and receiving Morse code at a minimum of 10 words per minute and wish to increase that capability to about 20 words per minute
- The Advanced class is for people who are capable of sending and receiving Morse code at a minimum of 20 words per minute and wish to increase that capability to about 30 words per minute

Classes at the CW Academy are free of charge. The advisors and staff are a volunteers who have a passion for CW. Classes are eight weeks long and held in January - February, May - June, and September - October. Classes meet twice a week for about an hour. Between classes the students have daily homework assignments which will take about an hour to complete.

Minimum essentials:

- High speed broadband internet access
- Computing device (desktop, laptop)
- Webcam (camera, microphone) either built-in or USB add-on
- Key paddle (single lever or dual lever. Straight keys or Bugs are not allowed)
- Keyer with sidetone or radio with built-in keyer and sidetone
- Dedication to 60 minutes of daily practice
- Comfortable understanding and speaking the English language unless previous arrangements have been made

Students are limited to one registration at a time in the system. When you have completed a class you may register for a future class.

To get started, please enter your call sign (or your last name if you do not have a call sign) and select the class level you are considering. Note: *call sign may not include a space, hyphen, or a slash.*

Call Sign
(if you do not have a call sign, enter your last name)

DN6EE

Class Level

Beginner
 Fundamental
 Intermediate
 Advanced

Email Address

.....

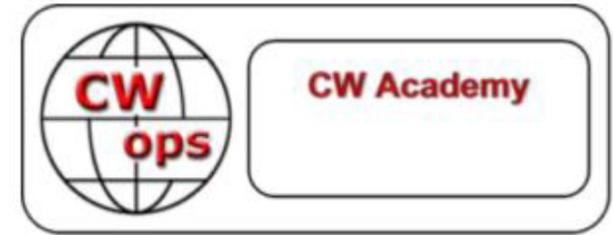
Important! Make certain that the email address you enter is spelled correctly and is complete. All communication from CW Academy is by email.

Semester

2024 May/Jun
 2024 Sep/Oct
 2025 Jan/Feb

Next

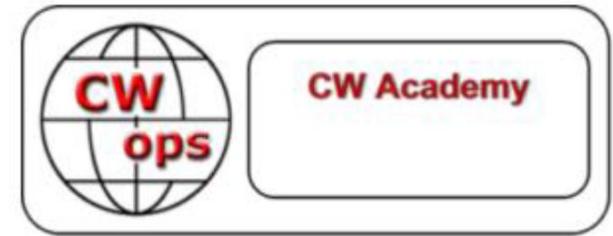
Anmeldung



➤ Herausforderungen:

- Da intensive Betreuung ist die Teilnehmerzahl begrenzt (max. 10 pro Kurs)
- Start im nächsten Semester (September/Oktober) mit Beginner, Fundamental und Intermediate
- Abschluss: Teilnahmeurkunde der CW Akademie
- Einfach erstmal anmelden, Bob Carter informiert uns über die Anmeldungen aus DL und weist sie uns zu!
- Wir suchen zur Unterstützung weitere Trainer (Advisor)

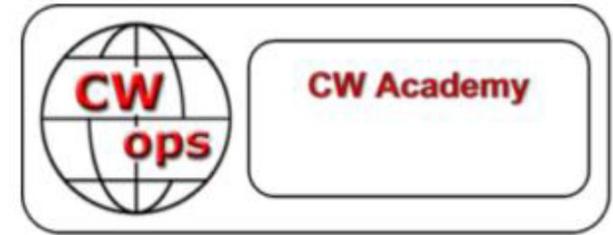
Kursablauf



- 2 Online Sessions pro Woche: Montag/Donnerstag 20 Uhr ME(S)Z auf treff.darc.de
- [CWops Morsetrainer Online](https://morsecode.world/international/trainer/trainer.html) (<https://morsecode.world/international/trainer/trainer.html>)
- Offline (noch nicht getestet): [Download Offline Morsetrainer](#) (<https://morsecode.world/international/trainer/morse-trainer-offline.zip>)
- LCWO online (<https://lcwo.net/>)
- Training mit dem CWops Tool

The screenshot shows the 'International Morse Training' website interface. At the top, there's a navigation bar with links for 'CW Generator', 'CWops (EN)', 'CWops (JP)', 'QSO', 'Word List', and 'ICR'. Below this, there are several input fields for user information: 'Your call sign', 'Your town/city and state abbreviation', 'Your name', 'Your age', 'Your power', and 'Your antenna'. The main content area is divided into three sections: 'Session', 'Feedback', and 'Morse Sound Controls'. The 'Session' section has a 'Previous' button, a 'Session' indicator showing '1/13', and a 'Next' button. The 'Feedback' section includes 'Show text' and 'Flashcard' buttons, and a 'Thinking time' input set to '75 %'. The 'Morse Sound Controls' section has sliders for 'Frequency' (550), 'Volume' (100), 'Character speed' (25), and 'Farnsworth speed' (4). Below these sections, there are tabs for 'Copying', 'Sending', 'Free-form', and 'Random'. The 'Copying' tab is active, showing a sequence of 't' characters in a box and a set of playback controls including 'Play', 'Pause', 'Stop', 'Previous', 'Segment' (1/18), 'Next', 'Repeat', 'Shuffle', and 'Download'.

Kursablauf

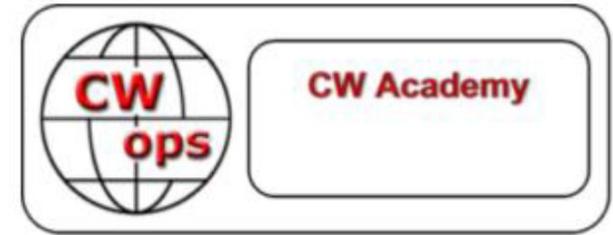


- Pro Session ein Arbeitsblatt mit den Aufgaben für Hören und Geben
- Wir arbeiten parallel mit den Skripten Original (Englisch) und Deutsch (Übersetzung durch Software)
- link: <https://cwops.org/cw-academy/cw-academy-student-resources/>

- Beginner
 - Practice & Homework Assignments – ENGLISH
 - Practice & Homework Assignments – GERMAN

- Fundamental
 - Practice & Homework Assignments – ENGLISH
 - Practice & Homework Assignments – GERMAN

Kursablauf - Intermediate



➤ Morserunner, LCWO, Soundfiles

New Short Files – Are available at speeds of 10, 13, 15, 18, 20 and 25 WPM.

Short Words – Starts with few characters and words and increase up to five of each.

Short Phrases – Start with few characters and words and increasing to six and four.

Short QSOS – Introduces common exchanges. Begin fairly simple and then have increasing complexity.

Short POTA – Typical POTA exchanges. Begin fairly simple and then have increasing complexity.

New Prefix Files – are available at speeds of 10, 13, 15, 18, 20 and 25 WPM.

Contains the four most commonly use prefixes – DIS, IM, IN, IR, RE and UN

Each prefix is repeated three times, then it sends associated words from 4 to 8 characters in length.

New Suffix Files – are available at speeds of 10, 13, 15, 18, 20 and 25 WPM.

Contains the four most commonly use suffixes – ED, ES, ING and LY

Each suffix is repeated three times, then it sends associated words from 4 to 8 characters in length.

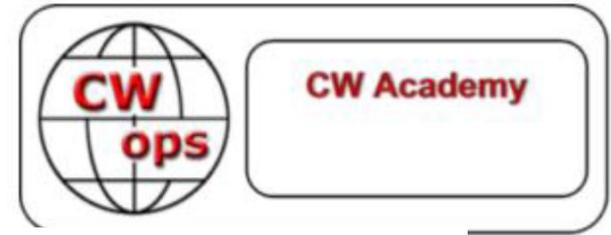
QSO Practice Files (QSO 201, etc.) – Are available at speeds of 10, 13, 15, 18, 20 and 25 WPM.

CWT Practice Files (CWT 201, etc.) – Are available at speeds of 20, 25 and 30 WPM. This is to give you experience in listening and getting ready to participate in CWT.

The weekly CWT – Is an 'on-air' higher-speed event, managed by CWops. These occur each Wednesday at 1300 UTC and 1900 UTC, and Thursday at 0300 UTC and 0700 UTC. Each is an hour long and provides a great opportunity to practice and learn techniques that can prepare you to work DX and/or become an effective contester. And they are fun.

RufzXP – Is an 'optional' practice application. It is a contest simulator and a great way to practice callsigns that come to you at different speeds. It 'rewards' or 'penalizes' based on the timing and accuracy of your response. A session is comprised of 50 callsigns, with two chances to get it correct. Practice this as desired or assigned by your advisor. See webpage: [Using RufzXP](#)

Session 1: Beginner



Session 01:

Characters for this session: **A E N T**
Characters learned 4: A E N T

Work through the copy practice for each message group using the MCT tool. Once you have committed all the copy practice to memory proceed to the sending practice section and go through each section in the same way.

Copy Practice

Characters:

A T E N

Words:

TEA	TEE	EAT	ATE	AT	TAT	TEEN
NEAT	TEN	TAN				

CW Abbreviations:

AA ANT NET

Phrases:

EAT AT TEN AN ANT AT TEE A NEAT ANT

Sending practice

Characters:

A T E N

Words:

TEA TEN TEE

CW Abbreviations:

AA ANT NET

Phrases:

EAT AT TEN AN ANT AT TEE A NEAT ANT

Sitzung 01:

MCT-Einstellungen:

Schriftgeschwindigkeit: 25 WPM oder höher.

Farnsworth-Geschwindigkeit: 4 WPM.

Charaktere für diese Sitzung:

Gelernte Zeichen 4: **A E N T**

Kopieren von Segmenten

Zeichen:

T T T T T E E E E E A A A A A N N N N N

Worte:

TEATEEATATEATTATEEN
NEATTENTAN

CW Abkürzungen:

AAANTNET

Redewendungen:

ESSEN BEI TENAN ANTAT TEEA NEAT ANT

Senden von Segmenten

Worte:

TEATEN TEE

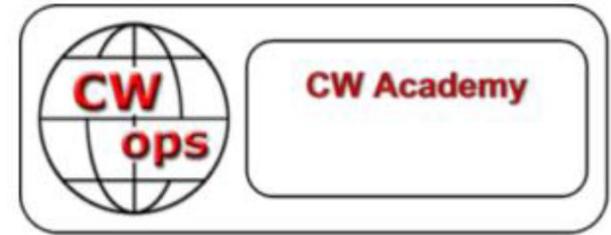
CW Abkürzungen:

AAANTNET

Redewendungen:

ESSEN BEI TENAN ANTAT TEEA NEAT ANT

Session 1: Beginner



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Characters learned 4: A E N T

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Copy Practice

Characters:

A T E N

Words:

TEA	TEE	EAT	ATE	AT	TAT	TEEN
NEAT	TEN	TAN				

CW Abbreviations:

AA ANT NET

Phrases:

EAT AT TEN AN ANT AT TEE A NEAT ANT

Sending practice

Characters:

A T E N

Words:

TEA TEN TEE

CW Abbreviations:

AA ANT NET

Phrases:

EAT AT TEN AN ANT AT TEE A NEAT ANT

Sitzung 01:

MCT-Einstellungen:

Zeichengeschwindigkeit: **25 WPM** oder höher.

Farnsworth-Geschwindigkeit: **4 WPM**.

Morsezeichen für diese Sitzung:

Neue Morsezeichen 4: **A E N T**

Hören

Zeichen:

TTTT EEEEE AAAAA NNNNN

Worte:

TEA	TEE	EAT	ATE	AT	TAT	TEEN
NEAT	TEN	TAN				

CW Abkürzungen:

AA ANT NET

Redewendungen:

EAT AT TEN AN ANT AT TEE A NEAT ANT

Geben

Worte:

TEA TEN TEE

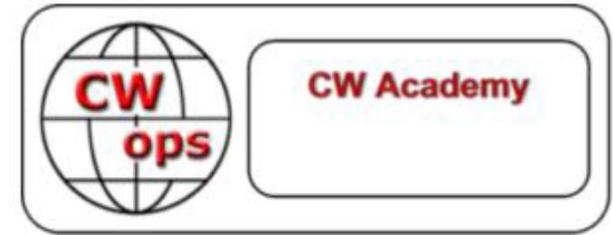
CW Abkürzungen:

AA ANT NET

Redewendungen:

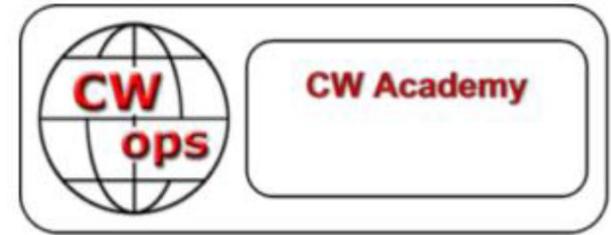
EAT AT TEN AN ANT AT TEE A NEAT ANT

WEB Seite Deutsch



- <http://cwa-dl.de/> (coming soon)
- Diese Präsentation, Basisinformationen, News Deutsch
- Verweis auf Cwops CWA Webseite

Lasst uns Starten



➤ Wir freuen uns auf den Kurs mit Euch!

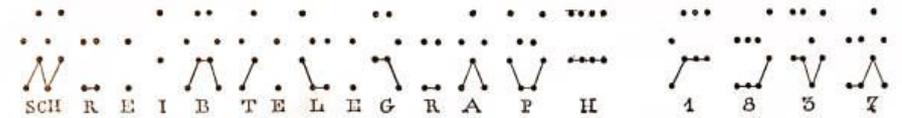
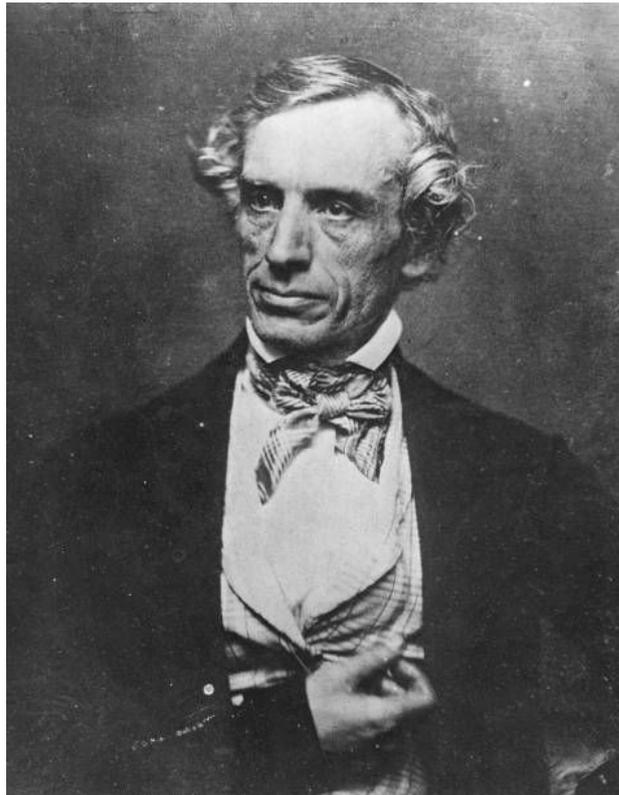


Fig. 4. Steinheil's Alphabet vom Juli 1837.

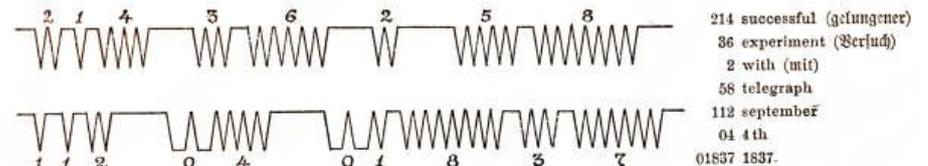


Fig. 5. Erste Morse-Depesche vom 4. September 1837.

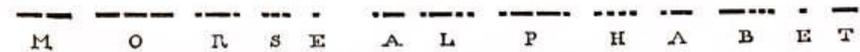


Fig. 6. Zeitiges Morse-Alphabet.

