

USER MANUAL



Avonic CamDirector® Teacher Tracker

CamDirector® Teacher Tracker software

DISCLAIMER AND CONTACT

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Contact Info

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IMPORTANT INFORMATION

Liability

Avonic will NOT be held responsible for any damage or injury caused by unqualified persons carrying out these tasks, or by not following the instructions in this Manual.

Intended Use and Non-Intended Use

Installation



The following applies to the **installation** of the Product:

- The installation activities described in this Manual should ONLY be executed by experienced technicians.
- The installation activities should NOT be executed by minors, mentally disabled persons or other persons not qualified to perform these tasks.







Operation



The following applies to the **operation** of the Product:

- The operational activities described in this Manual should ONLY be executed by people with enough technical knowledge to perform the activities in a safe manner.
- This Product is specifically developed for video conferencing / streaming via internet by companies, institutes and universities. It is NOT meant for private use in the residential area.
- This Product is NOT a medical device and should NOT be used as a substitute for professional medical judgment. It is NOT designed or intended for use in the diagnosis of disease or other conditions, or in the cure, mitigation, treatment, or prevention of any condition or disease. Please consult your healthcare provider prior to making any decisions related to your health.

Symbols Used in This Manual

Symbol	Meaning	Description
	Danger	Not following the instructions associated with this symbol may lead to personal injury and / or serious damage to the Product.
	Electrical Shock	Not following the instructions associated with this symbol may lead to life-threatening situations and / or serious damage to the Product.
	Important	The information associated with this symbol requires special attention.
	Information	The information associated with symbol refers to a general remark or a reference to other documentation.
	Instruction	This symbol refers to one or more user instructions.
	Recycling	Specific parts of the Product can be re-used.

Acronyms

The following acronyms are used in this Manual:

HD	High Definition
HDMI	High-Definition Multimedia Interface
IP	Internet Protocol
PoE	Power over Ethernet
PTZ	Pan / Tilt / Zoom
RTMP	Real-Time Messaging Protocol
RTSP	Real-Time Streaming Protocol
SKU	Stock Keeping Unit

Gebruikersvoorwaarden Avonic

Avonic levert onder andere camera's, audiovisuele of IT-systemen. Avonic stelt voorwaarden aan het gebruik van haar camera's, audiovisuele of IT-systemen en de (embedded) software. Die voorwaarden zijn opgenomen in deze gebruikersvoorwaarden. Iedere gebruiker van Avonic camera's, audiovisuele of IT-systemen dient zich te conformeren aan deze gebruikersvoorwaarden.

OM GEBRUIK TE KUNNEN MAKEN VAN DE AVONIC SUPPORT SERVICE, IS REGISTRATIE ALS GEBRUIKER BIJ AVONIC VERPLICHT. LEES HIER HOE: WWW.AVONIC.COM/REGISTER

MEEWERKEN AAN DE VERDERE ONTWIKKELING VAN AVONIC CAMERA'S, AUDIOVISUELE OF IT-SYSTEMEN? SLUIT JE AAN BIJ HET AVONIC PRODUCT DEVELOPMENT PROGRAM. LEES VOOR DE VOORDELEN EN VOORWAARDEN HIER: WWW.AVONIC.COM/REGISTER

1. Definities

De volgende definities zijn van toepassing op deze gebruikersvoorwaarden:

1.1 Avonic: de besloten vennootschap met beperkte aansprakelijkheid, geregistreerd onder de wettelijke naam Avonic B.V. (tot november 2020: Aventure B.V.), geregistreerd bij de Kamer van Koophandel onder nummer 63411148, welke onderneming zich bezighoudt met de productie van en handel in camera's, audiovisuele en IT-systemen;

1.2 Avonic Producten en Diensten: Alle door Avonic verstrekte producten en diensten, de daaruit voortvloeiende voorzieningen en de daarmee samenhangende werkzaamheden die niet afkomstig zijn van derden en waarvan eventuele intellectuele eigendomsrechten, industriële eigendomsrechten en andere rechten bij Avonic berusten.

1.3 Installateur: De natuurlijke of rechtspersoon, die handelend in de uitoefening van zijn beroep of bedrijf, Avonic Producten of Diensten op rechtmatige titel aan de Gebruiker heeft geleverd.

1.4 De Gebruiker: Een (eind)gebruiker van een Avonic Product die (I) het Avonic Product rechtmatig heeft verkregen, (II) de 'Embedded software' van het Avonic Product slechts gebruikt voor zover redelijkerwijs nodig om het Avonic Product te gebruiken in overeenstemming met deze gebruikersvoorwaarden en alle toepasselijke intellectuele eigendomswetgeving en (III) het Avonic Product slechts gebruikt voor rechtmatige doeleinden op rechtmatige wijze in overeenstemming met de op hem of haar toepasselijke wet- en regelgeving.

1.5 Embedded software: Computerprogrammatuur die als onderdeel van een fysiek (hardware) Avonic Product wordt meegeleverd zonder welke deze niet kan functioneren.

1.6 Support: Het geven van mondelinge (telefonische) en schriftelijke (e-mail) adviezen met betrekking tot het gebruik en de werking van Avonic Producten en Diensten of Diensten.

2. Registratieplicht voor aanvullende dienstverlening van Avonic

2.1 Gebruiker dient zich bij Avonic te registreren alvorens de Gebruiker een beroep kan doen op de aanvullende dienstverlening van Avonic, waaronder de verlening van Support op afstand.

2.2 Gebruiker erkent dat hij in plaats van Avonic de Installateur kan benaderen met eventuele verzoeken om ondersteuning.

2.3 Enkel na registratie en volledige betaling van de aan Avonic verschuldigde kosten, waaronder de licentiekosten zal Avonic overgaan tot het leveren van Support op Embedded Software die op rechtmatige en correcte wijze is geïnstalleerd op een Avonic Product.

3. Aanmelden bij het Avonic Product Development Program

3.1 Avonic zet zich in voor technologische innovatie. Daarbij hoort de verdere ontwikkeling van de technologie van camera's, audiovisuele of IT-systemen.

3.2 Gebruikers kunnen deelnemen aan het Avonic Product Development Program. Avonic en de Gebruiker sluiten een schriftelijke overeenkomst met betrekking tot de deelname van de Gebruiker aan het Avonic Product Development Program waarin de rechten en verplichtingen van partijen, alsmede de waarborgen die Avonic en de pilot-partner jegens derden zullen realiseren schriftelijk worden vastgelegd.

3.3 In het kader van het Avonic Product Development Program bestaat de mogelijkheid dat ingevolge de Algemene Verordening Gegevensbescherming (AVG) een *data protection impact assessment* dient te worden uitgevoerd alvorens het Avonic Product Development Program kan worden uitgevoerd. Is na onderzoek gebleken dat Gebruiker geen geschikte kandidaat is voor het Avonic Product Development Program, bijvoorbeeld uit de resultaten van een *data protection impact assessment*, en kunnen geen maatregelen worden getroffen om de risico's voor de bescherming en de persoonlijke levenssfeer van derden adequaat te adresseren dan is Avonic gerechtigd de Gebruiker uit te sluiten van het Avonic Product Development Program.

4. Gebruiksrecht op Embeddedsoftware

4.1 De mogelijkheid bestaat voor sommige Avonic Producten en Diensten om camera's, audiovisuele of IT-systemen van Avonic te voorzien met software(modules). Bijvoorbeeld om een camera in staat te stellen om beweging te volgen. Deze software is Embedded Software. Zonder het Avonic Product hardware (de camera) werkt de Embedded Software niet.

4.2 Avonic verleent de Gebruiker van Avonic producten het niet-exclusieve recht tot het gebruik van Embedded Software die samen met de hardware waar de Embedded Software op kan worden geïnstalleerd ter beschikking wordt gesteld op 'per product' basis. Per Avonic Product (hardware) wordt een activatiecode verstrekt die de mogelijkheid biedt om de Embedded Software op het Avonic Product te installeren. De Embedded Software mag slechts worden gebruikt op dat specifieke Avonic Producten en Diensten en is niet overdraagbaar op andere Avonic Producten en Diensten en Avonic hardware, de Embedded Software mag niet worden gebruikt op andere hardware.

4.3 De software mag slechts in combinatie met andere goederen, producten of diensten gebruikt worden wanneer het door Avonic bedoeld is daarmee in samenhang gebruikt te worden.

4.4 Het gebruiksrecht wordt steeds verleend voor de betaalperiode die schriftelijk is overeengekomen met Avonic of een derde partij die voor Avonic Producten en Diensten en de Embedded Software levert. Dit kan onder andere op maandbasis of jaarbasis zijn. De licentieperiode wordt steeds stilzwijgend verlengd met dezelfde betaalperiode. Opzegging geschiedt door een aangetekende brief die uiterlijk 2 maanden voor dat de verlenging intreedt door Avonic moet zijn ontvangen.

4.5 Het gebruiksrecht voor de Gebruiker is beperkt tot het uitsluitend voor eigen gebruik aanwenden van de Embedded Software geïnstalleerd of te installeren op de Avonic Producten en Diensten (hardware) middels de activatiecode. Het gebruiksrecht is beperkt tot het Avonic Product (hardware) waarop de Embedded Software het eerst is geïnstalleerd en het aantal gebruikers is steeds beperkt tot 1 (één) per device. Het gebruiksrecht op software is slechts overdraagbaar gelijktijdig met overdracht van het Avonic Product waarop de Embedded Software is geïnstalleerd.

4.6 Het gebruiksrecht voor software is beperkt tot de Objectcode. Rechten op de onderliggende programmatuur en Sourcecodes zelf worden niet verstrekt.

4.7 Het gebruiksrecht gaat in nadat betaling voor de licentie heeft plaatsgevonden. Avonic behoudt zich het recht voor om het gebruiksrecht op te schorten indien niet tot betaling is overgegaan of niet aan deze gebruikersvoorwaarden wordt voldaan.

4.8 Aan de verstrekking van een gebruiksrecht voor welke periode dan ook, kunnen geen rechten met betrekking tot onderhoud worden ontleend.

4.9 Het gebruiksrecht eindigt na afloop van een licentieperiode, indien deze licentieperiode niet wordt verlengd. Alleen indien het Avonic Product (hardware) waarop de Embedded software is geïnstalleerd gebrekkig is en onder de garantiebepalingen van Avonic wordt vervangen, wordt het gebruiksrecht op het gebrekkige Product omgezet naar het Product wat het gebrekkige Product vervangt. Op Avonic rust geen verplichting om licentiekosten te restitueren, ook niet indien er sprake is van een Avonic Product wat het einde van haar levenscyclus heeft bereikt (*end of life*) binnen de licentieperiode.

4.10 De omvang van het gebruiksrecht op software waarvan de intellectuele eigendomsrechten (deels) bij derden berusten wordt bepaald door de algemene voorwaarden van die derden. In het geval van tegenstrijdigheid tussen bepalingen uit de algemene voorwaarden van de derden en deze gebruikersvoorwaarden treden de bepalingen uit deze gebruikersvoorwaarden in de rangorde boven algemene voorwaarden van derden.

4.11 Het is verboden de Embedded software of de Producten (hardware) op welke wijze dan ook zelf en/of met behulp van derden te kopiëren, dupliceren of te wijzigen. Het is ieder ander dan Avonic zelf verboden functionaliteiten toe te voegen aan de geïnstalleerde Embedded software zonder voorafgaande schriftelijke toestemming van Avonic.

4.12 Reverse engineering, decompilatie of enige andere wijze van aanpassing van de software naar een voor mensen leesbare vorm, dan wel blootlegging of aanpassing van de hardware, is verboden voor ieder ander dan Avonic zelf, tenzij expliciet op grond van dwingend recht toegestaan.

5. Onderhoud en support op (Embedded) software

5.1 Onderhoud op Embedded software omvat het naar eigen inzicht van Avonic ter beschikking stellen van updates voor de gelicentieerde Avonic Producten en Diensten of Diensten die een kwalitatieve (b.v. fouterstel) dan wel functionele verbetering van het ter beschikking gestelde Avonic Product inhouden, eventueel met inbegrip van documentatie daarvan. Avonic is niet verplicht om op actieve wijze de Installateur en/of de Gebruiker op de hoogte te houden van eventuele updates of andere verbeteringen.

5.2 Indien onderhoud een functionele verbetering inhoudt, is Avonic gerechtigd om extra kosten in rekening te brengen ter compensatie van deze functionele verbetering.

5.3 Avonic is gerechtigd de verstrekking van onderhoud te weigeren indien de Avonic Producten en Diensten of Diensten, zoals camera's, audiovisuele of IT-systemen, dan wel de fysieke of digitale omgevingen waarin voornoemde Avonic Producten en Diensten opereren in welke vorm of op welke wijze dan ook zijn gewijzigd door de Installateur of de gebruiker sinds de oorspronkelijke installatie.

5.4 Indien de Installateur en/of de Gebruiker nieuwe updates weigert te installeren die door Avonic zijn aangeboden, behoudt Avonic zich het recht voor om geen onderhoud en support meer te leveren, zonder dat restitutie van betaalde gelden volgt.

5.5 Avonic zal uitsluitend Support verstrekken op de meest recente updates van de software. Avonic is gerechtigd naar eigen inzicht Support te verstrekken op oudere versies, releases, etc. van software geïnstalleerd op geleverde Producten.

5.6 De Installateur dan wel Gebruiker dient na iedere update zelf te testen of het Avonic Product met Embedded Software na update functioneert en de update correct heeft plaats gevonden. Avonic is immers niet in staat te controleren of een update voor elk Avonic Product op correcte wijze heeft plaats gevonden.

6. Onderhoud en support – live meekijken

6.1 Om Support te kunnen leveren kan het voorkomen dat Avonic op verzoek van de Gebruiker op afstand meekijkt in camera's, audiovisuele of IT-systemen en meekijkt en/of meeluistert met de beelden en naar het geluid. Tijdens het live meekijken zullen geen opnames worden gemaakt of anderszins gegevens worden opgeslagen.

6.2 In het kader van de bescherming van persoonsgegevens en borging van het recht op privacy dient Gebruiker tijdens Support er voor zorg te dragen dat Avonic zo min mogelijk inzage verkrijgt in data die persoonsgegevens bevatten. Dit houdt onder andere in dat:

a) Gebruiker er zorg voor draagt dat zo min mogelijk personen via de camera identificeerbaar in beeld of te horen zijn en geen persoonsgegevens of gevoelige informatie leesbaar in beeld is gedurende de periode dat Avonic live meekijkt.

b) Gebruiker er zorg voor draagt dat alle personen die in beeld zijn tijdens de uitvoering van het onderhoud of de support waarbij Avonic live meekijkt worden geïnformeerd dat Avonic meekijkt.

6.3 Avonic is gerechtigd het leveren van onderhoud en Support met gebruik van live meekijken te onderbreken, te weigeren of uit te stellen wanneer, naar het oordeel van Avonic teveel personen herkenbaar in beeld zijn, wanneer Avonic aanleiding heeft om te twijfelen dat de personen in beeld op adequate wijze zijn geïnformeerd, of om welke reden dan ook.

6.4 Gebruiker is gehouden na afloop van de Support waarbij live meekijken op afstand heeft plaatsgevonden alle noodzakelijke handelingen te verrichten, opdat Avonic geen inzage meer heeft in real time beeld en geluid afkomstig van de camera's, audiovisuele of IT-systemen van de Gebruiker. Dit dient Gebruiker te door de stappen te volgen zoals beschreven in de handleiding van het Avonic Product.

7. Privacy & Gegevensbescherming

7.1 Gebruiker houdt zich aan alle op hem toepasselijke wet- en regelgeving bij gebruik van Avonic Producten of Diensten, inclusief de Algemene Verordening Gegevensbescherming (AVG) en Uitvoeringswet Algemene Verordening Gegevensbescherming (UAVG).

7.2 Gebruiker neemt ook het Wetboek van Strafrecht (Sr), het Wetboek van Strafvordering (Sv) en eventuele andere strafrechtelijke of strafvorderlijke wet- en regelgeving in acht en handelt niet in strijd met deze wet en regelgeving met gebruik van Avonic Producten of Diensten.

7.3 Gebruiker positioneert Avonic producten op een dusdanige wijze dat hij geen of zo min mogelijk persoonsgegevens verwerkt (bijvoorbeeld door de camera's hoog te plaatsen).

7.4 Gebruiker zal slechts persoonsgegevens verwerken met gebruik van Avonic producten wanneer Gebruiker zich daartoe kan beroepen op een rechtmatige grondslag, dan wel uitzondering op het verbod op verwerking van bijzondere persoonsgegevens, onder de Algemene Verordening Gegevensbescherming (AVG).

7.5 Gebruiker camera's of vergelijkbare Avonic Producten slechts inzetten voor stelselmatig cameratoezicht wanneer Gebruiker hiermee een legitiem doel dient dat niet op een minder ingrijpende wijze kan worden bereikt. Gebruiker zal hierbij geen geluidsopnames maken en steeds duidelijk aangeven dat er sprake is van cameratoezicht, bijvoorbeeld door een waarschuwbord te plaatsen.

7.6 Gebruiker zal geen camera's of vergelijkbare Avonic Producten installeren in toiletten of kleedkamers.

7.7 Gebruiker zal geen camera's of vergelijkbare Avonic Producten installeren in woonruimtes.

7.8 Gebruiker zal een redelijke bewaartermijn hanteren voor camerabeelden.

7.9 Avonic is niet aansprakelijk voor claims van derden die verband houden met schending van de AVG of inbreuk op de persoonlijke levenssfeer. Blijkt Avonic op grond van een gerechtelijke uitspraak alsnog geheel of gedeeltelijk aansprakelijk te zijn voor claims van derden die verband houden met schending van de AVG of inbreuk op de persoonlijke levenssfeer, dan is Avonic gerechtigd het schadebedrag en andere eventuele gerelateerde kosten op de Gebruiker te verhalen.

7.10 Gebruiker zal een data protection impact assessment (DPIA) uitvoeren wanneer Gebruiker voornemens is met gebruik van Avonic Producten een gegevensverwerking uit te voeren die waarschijnlijk een hoog risico oplevert voor de privacy van de personen van wie de Gebruiker gegevens verwerkt. Gebruiker zal vooraf de privacy risico's van een gegevensverwerking in kaart te brengen en alle beschikbare maatregelen treffen om de risico's te verkleinen. Avonic stelt slechts camera's, audiovisuele of IT-systemen ter beschikking en is op geen enkele wijze verantwoordelijk voor het gebruik van Avonic Producten en Diensten en de Embedded software, noch voor het beoordelen van de risico's voor de privacyrechten van betrokkenen bij het door Gebruiker (voorgenomen) gebruik van Avonic Producten.

7.11 Gebruiker erkent Avonic Producten en Diensten en Diensten al dan niet in combinatie met Embedded Software niet geschikt zijn voor gebruik binnen ieder netwerk en dat gebruik niet altijd veilig is zonder passende maatregelen te treffen. Avonic adviseert Avonic Producten en Diensten enkel te gebruiken binnen een gesloten netwerk, dan wel binnen een goed beveiligd netwerk. Avonic is niet verantwoordelijk voor het netwerk en de beveiliging hiervan. Avonic is niet aansprakelijk voor de netwerkbeveiliging van Gebruiker, waar Avonic immers geen invloed op kan uitoefenen.

8. Controles

8.1 Avonic is gerechtigd technische beperkingen en controle-mechanismen in Avonic Producten en Diensten, te verwerken om misbruik te voorkomen en/of te controleren of de Gebruiker deze slechts gebruiken in overeenstemming met deze gebruikersvoorwaarden.

8.2 Avonic is gerechtigd, zelf of door middel van een derde, aangekondigd of onaangekondigd, controles uit te voeren op locaties waar de Avonic Producten en Diensten gebruikt worden wanneer hiertoe naar het oordeel van Avonic een serieuze aanleiding toe bestaat, zolang een Gebruiker gebruik maakt van Avonic Producten en Diensten. Gebruiker zal ervoor zorg dragen dat hiertoe alle medewerking en toegang wordt verstrekt.

8.3 Indien Gebruiker medewerking dan wel de toegang aan Avonic weigert, is Avonic gerechtigd alle overeenkomsten met de Gebruiker, waaronder de verstrekking van de gebruikslicentie, met onmiddellijke ingang te beëindigen zonder verder schadeplichtig te zijn. De Gebruiker is in dit geval niet langer gerechtigd tot het gebruik van de software van de Avonic Producten en Diensten en Diensten.

9. Aansprakelijkheid

9.1 Avonic is niet aansprakelijk voor enige overtreding van wet- en regelgeving met gebruik van Avonic Producten en/of Diensten door de Installateur of Gebruiker. Avonic kan niet nagaan en dus ook niet aangesproken worden op het gebruik van haar Producten door Gebruikers en/of derden. Gebruiker vrijwaart Avonic hiervoor in de ruimste zin des woords. Het is aan Gebruiker zelf om alle op hem toepasselijke wet- en regelgeving na te leven.

9.2 Avonic is niet aansprakelijk voor schade, van welke aard dan ook, tenzij de aansprakelijkheid van Avonic volgt uit bepalingen van dwingend recht. In het laatste geval zal Avonic de schade verhalen op de Gebruiker, de Installateur of derde die door zijn doen of nalaten de schade heeft veroorzaakt.

9.3 In alle gevallen waarin Avonic verplicht is een schadevergoeding te betalen, is de totale aansprakelijkheid van Avonic jegens de Gebruiker uit welke theorie of grond dan ook voor zover wettelijk toegestaan altijd beperkt tot de netto factuurwaarde van het Product, of tot dat deel van de netto factuurwaarde waarmee een vordering tot schadevergoeding direct of indirect verband houdt. De totale door Avonic verschuldigde schadevergoeding zal in geen geval meer bedragen dan € 100.000,- per gebeurtenis, waarbij een reeks gerelateerde gebeurtenissen als één gebeurtenis worden beschouwd.

9.5 Alle vorderingen op Avonic, behalve die welke door Avonic zijn erkend, vervallen door het enkele verloop van 12 maanden na het ontstaan van die vordering.

9.6 Indien sprake is van een opzet, grove schuld of bewuste roekeloosheid van Avonic gelden de beperkingen op aansprakelijkheid in dit artikel niet.

10. Gedragscode

10.1 Gebruiker dient op verantwoorde wijze gebruik te maken van de Avonic Producten en Diensten en/of overige aangeboden faciliteiten. Het is verboden de Avonic Producten en Diensten en/of overige aangeboden faciliteiten op enige wijze te gebruiken waardoor zich:

a) beschadigingen kunnen voordoen in de systemen van Avonic en/of derden;

b) verstoringen in het gebruik kunnen voordoen.

10.2 Het is verboden Avonic Producten en Diensten en/of overige aangeboden faciliteiten voor illegale praktijken te benutten. Hieronder vallen onder andere de volgende handelingen en gedragingen:

a) het inbreuk maken op de rechten van derden of het mogelijk maken inbreuk te plegen op de rechten van derden, zoals maar niet beperkt tot intellectuele eigendomsrechten en privacyrechten;

b) het niet voldoen aan de geldende wetgeving en/of overige regelgeving ter zake;

c) *spamming* (het ongevraagd verspreiden (of thans voor derden mogelijk te maken) van reclameboodschappen en overige mededelingen);

d) het creëren/bewaren/verspreiden van (kinder)pornografie;

e) veroorzaken van gevaar voor het functioneren van computer-systemen of netwerken van Avonic of derde partijen;

f) seksuele intimidatie, discriminatie en/of het op andere wijze lastig vallen van personen;

g) verspreiding dan wel op enige andere wijze voor derden beschikbaar te stellen van obscene-, beledigend- en kwellend materiaal en/of ander materiaal van dergelijke aard;

h) dreigementen;

i) opslag en verspreiding van virussen, worms en/of overige destructieve activiteiten;

j) het zonder toestemming binnendringen (hacken) van accounts, systemen en/of netwerken van derden en/of Avonic en/of het verrichten en/of nalaten van enige andere handeling die hacken mogelijk maakt.

10.3 Avonic behoudt zich het recht voor de Avonic Producten en Diensten en/of de overige aangeboden faciliteiten buiten gebruik te stellen voor een Gebruiker, indien naar Avonic's eigen oordeel, indien daartoe genoodzaakt krachtens de wet of rechterlijke uitspraak en/of indien een derde Avonic erop wijst en/of het vermoeden daartoe bestaat dat door middel van de Avonic Producten en Diensten inbreuk wordt gemaakt op rechten van derden, in strijd wordt gehandeld met hetgeen in deze gebruikersvoorwaarden de daaruit voortvloeiende verplichtingen ter zake niet, niet behoorlijk of niet volledig worden nagekomen.

10.4 Avonic zal nimmer aansprakelijk zijn voor door Gebruiker en/of derden geleden schade van welke aard dan ook als gevolg van de op basis van het voorgaande lid genomen maatregelen. Gebruiker kan zich niet beroepen op een opschortingsrecht.

10.5 Indien de ernst van het handelen en/of niet handelen van Gebruiker dit rechtvaardigt en/of deze worden voortgezet ondanks de maatregelen van en/of ten behoeve van Avonic, hebben Avonic en/of de Installateur het recht alle overeenkomsten met de Gebruiker te ontbinden, zonder dat Avonic of de Installateur tot enige schadevergoeding ter zake dan wel tot restitutie van reeds betaalde gelden is gehouden.

11. Wijziging van gebruikersvoorwaarden

11.1 Op alle rechtsbetrekkingen van Avonic is het Nederlands recht van toepassing.

11.2 Avonic is gerechtigd deze gebruikersvoorwaarden te wijzigen of aan te vullen.

11.3 De meest actuele versie van deze gebruikersvoorwaarden kan worden geraadpleegd op de website: www.avonic.com/terms-conditions.

12. Contact

Om contact op te nemen met Avonic

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E-mail: info@avonic.com

Post: Exportweg 11a, 2645 ED, Delfgauw, The Netherlands

Registratie voor de Avonic Support Service: www.avonic.com/register

Aanmelding voor het Avonic Product Development Program: www.avonic.com/register

Terms of Use Avonic

Avonic supplies, among other things, cameras, audiovisual or IT systems. Avonic sets conditions on the use of its cameras, audiovisual or IT systems and the (embedded) software. These conditions are included in these user terms and conditions. Every user of Avonic cameras, audiovisual or IT systems must comply with these user terms.

IN ORDER TO USE THE [AVONIC SUPPORT SERVICE](#), REGISTRATION WITH AVONIC AS A USER IS MANDATORY. READ HERE HOW: [WWW.AVONIC.COM/REGISTER](#)

WANT TO PARTICIPATE IN THE FURTHER DEVELOPMENT OF AVONIC CAMERAS, AUDIOVISUAL OR IT-SYSTEMS? JOIN THE [AVONIC PRODUCT DEVELOPMENT PROGRAMME](#). READ ABOUT THE BENEFITS AND CONDITIONS HERE: [WWW.AVONIC.COM/REGISTER](#)

1. Definitions

The following definitions apply to these user terms and conditions:

1.1 Avonic: the private company with limited liability, registered under the legal name Avonic B.V. registered with the Chamber of Commerce under number 63411148, which company is engaged in the production of and trade in cameras, audiovisual and IT systems;

1.2 Avonic Products and Services: All products and services provided by Avonic, the resulting provisions and the associated activities which do not originate from third parties and for which any intellectual property rights, industrial property rights and other rights are vested in Avonic.

1.3 Installer: The natural or legal person who, acting in the exercise of his profession or business, has supplied Avonic Products or Services to the User in a legitimate manner.

1.4 User: A (final) user of an Avonic Product who (I) has acquired the Avonic Product lawfully, (II) only uses the "Embedded software" of the Avonic Product to the extent reasonably necessary to use the Avonic Product in accordance with these terms of use and all applicable intellectual property laws, and (III) only uses the Avonic Product for lawful purposes in accordance with the laws and regulations applicable to him or her.

1.5 Embedded software:

Computer software supplied as part of a physical (hardware) Avonic Product without which it cannot function.

1.6 Support:

The provision of verbal (telephone) and written (e-mail) advice regarding the use and operation of Avonic Products and Services.

2. Registration requirement for additional services by Avonic

2.1 User must register with Avonic before User can make use of Avonic's additional services, including the provision of remote support.

2.2 User acknowledges that, instead of Avonic, he may approach the Installer with any requests for support.

2.3 Only after registration and full payment of the costs owed to Avonic, including the license fee, will Avonic provide support for Embedded Software that is lawfully and correctly installed on an Avonic Product.

3. Signing up to the Avonic Product Development Program

3.1 Avonic is committed to technological innovation. This includes the further development of the technology of cameras, audiovisual or IT systems.

3.2 Users may participate in the Avonic Product Development Program. Avonic and the User enter into a written agreement regarding the participation of the user in the Avonic Product Development Program, in which the rights and obligations of the parties, as well as the guarantees which Avonic and the pilot partner will provide to third parties, are set out in writing.

3.3 As part of the Avonic Product Development Program, it is possible that, in accordance with the General Data Protection Regulation (GDPR), a data protection impact assessment must be carried out before the Avonic Product Development Program can be carried out. If, following an investigation, it is found that the User is not a suitable candidate for the Avonic Product Development Program, for example from the results of a data protection impact assessment, and no measures can be taken to adequately address the risks to the protection and privacy of third parties, Avonic is entitled to exclude the User from the Avonic Product Development Program.

4. Right of use on embedded software

4.1 The possibility exists for some Avonic Products and Services to enrich cameras, audiovisual or IT systems from Avonic with software (modules). For example, to enable a camera to track motion. This software is Embedded Software. Without the Avonic Product hardware (the camera), the Embedded Software does not function.

4.2 Avonic grants the User of Avonic Products the non-exclusive right to use Embedded Software which, together with the hardware on which the Embedded Software can be installed, is made available on a "per Product" basis. An activation code shall be supplied per Avonic Product (hardware) which makes it possible to install the Embedded Software on the Avonic Product. The Embedded Software may only be used on that specific Avonic Product and Service and is not transferable to other Avonic Products and Services and Avonic hardware; the Embedded Software may not be used on other hardware.

4.3 The software may only be used in conjunction with other goods, products or services if it is intended by Avonic to be used in conjunction with them.

4.4 The right of use is always granted for the payment period agreed in writing with Avonic or a third party supplying Products and Services and the Embedded Software for Avonic. This may be on a monthly or annual basis. The licence period is always tacitly extended by the same payment period. Termination occurs by means of a registered letter which must be received by Avonic no later than 2 months before the renewal becomes effective.

4.5 The User's right of use is limited to the Embedded Software installed or to be installed on the Avonic Products and Services (hardware) by means of the activation code for own use only. The right of use is limited to the Avonic Product (hardware) on which the Embedded Software was first installed, and the number of users is always limited to 1 (one) per device. The right of use for software can only be transferred together with the transfer of the Avonic Product on which the Embedded Software is installed.

4.6 The right of use for software is limited to the Object Code. Rights to the underlying software and Source Code itself are not granted.

4.7 The right of use shall take effect after payment for the license has been made. Avonic reserves the right to suspend the right of use if payment is not made or these terms and conditions are not met.

4.8 No rights with regard to maintenance can be derived from the granting of a right of use for any period whatsoever.

4.9 The right of use ends at the end of a license period, if this license period is not extended. Only if the Avonic Product (hardware) on which the Embedded software is installed is defective and is replaced under the terms of the Avonic warranty, shall the right of use on the defective Product be converted to the Product which replaces the defective Product. Avonic is under no obligation to refund licence fees, even if it is a case of an Avonic Product which has reached the end of its life cycle within the licence period.

4.10 The scope of the right to use software of which the intellectual property rights lie (partly) with third parties is determined by the general terms and conditions of those third parties. In the event of any conflict between the provisions of the third parties' general terms and conditions and these Terms of Use, the provisions of these Terms of Use shall take precedence over the third parties' general terms and conditions.

4.11 It is prohibited to copy, duplicate or modify the Embedded software or Products (hardware) in any way whatsoever yourself and/or with the help of third parties. Any party other than Avonic itself is prohibited from adding functionalities to the installed Embedded software without prior written consent from Avonic.

4.12 Reverse engineering, decompilation or any other method of adapting the software to a human-readable form, or exposing or modifying the hardware, is prohibited for anyone other than Avonic itself, unless explicitly permitted by mandatory law.

5. Maintenance and support for (Embedded) software

5.1 Embedded Software maintenance comprises the provision, at Avonic's discretion, of updates for the licensed Avonic Products and Services or Services which contain a qualitative (e.g. fault repair) or functional improvement to the Avonic Product provided, possibly including documentation thereof. Avonic is not obliged to actively keep the Installer and/or the User informed of any updates or other improvements.

5.2 If maintenance involves a functional improvement, Avonic is entitled to charge additional costs to compensate for this functional improvement.

5.3 Avonic is entitled to refuse to provide maintenance if the Avonic Products and Services, such as cameras, audio-visual or IT systems, or the physical or digital environments in which the aforementioned Avonic Products and Services operate have been modified in any way or form by the Installer or the User since the original installation.

5.4 If the Installer and/or the User refuses to install new updates offered by Avonic, Avonic reserves the right to no longer provide maintenance and support, without refunding any monies paid.

5.5 Avonic will only provide Support for the most recent updates of the software. Avonic is entitled, at its discretion, to provide Support for older versions, releases, etc. of software installed on delivered Products.

5.6 The Installer or User must test the Avonic Product with Embedded Software after each update to ensure that it functions properly and that the update has been carried out correctly. Avonic is not able to check whether an update for each Avonic Product has been carried out correctly.

6. Maintenance and support - live monitoring

6.1 In order to provide Support, Avonic may, at the User's request, remotely monitor cameras, audiovisual or IT systems and watch and/or listen to the images and the sound. No recordings will be made or data saved during the live monitoring.

6.2 In the context of protecting personal data and guaranteeing the right to privacy, User must ensure, during Support, that Avonic has as little access as possible to data containing personal data. This means, among other things, that:

a) User must ensure that as few people as possible can be seen or heard through the camera and that no personal data or sensitive information can be read during the period that Avonic is watching live.

b) The User must ensure that all persons who are on screen during the performance of maintenance or Support, whereby Avonic is watching live, are informed that Avonic is watching.

6.3 Avonic is entitled to interrupt, refuse or postpone the provision of maintenance and Support using live monitoring, if, in the opinion of Avonic, there are too many people recognisable on the screen, if Avonic has reason to doubt that the people on the screen have been adequately informed, or for any other reason.

6.4 The User is obliged, at the end of the Support during which live remote viewing took place, to take all necessary action so that Avonic is no longer able to view real time images and sound from the User's cameras, audio-visual or IT systems. This must be done by the User by following the steps described in the manual of the Avonic Product.

7. Privacy & Data protection

7.1 User shall comply with all laws and regulations applicable to him/her when using Avonic Products or Services, including the General Data Protection Regulation (GDPR) and the Dutch General Data Protection Act (Uitvoeringswet Algemene Verordening Gegevensbescherming (UAVG)).

7.2 User shall also comply with the Dutch Penal Code (Wetboek van Strafrecht, Sr), the Dutch Code of Criminal Procedure (Wetboek van Strafvordering, Sv) and any other criminal or procedural laws and regulations and shall not act in conflict with these laws and regulations when using Avonic Products or Services.

7.3 Users shall position Avonic products in such a way that no, or as little, personal data is processed (for example, by placing the cameras high up).

7.4 User shall only process personal data by using Avonic products if User can rely on a lawful basis, or an exception to the ban on processing special personal data under the General Data Protection Regulation (GDPR).

7.5 User shall only use cameras or comparable Avonic Products for systematic camera surveillance if User serves a legitimate objective which cannot be achieved in a less drastic manner. The User will not make any sound recordings and will always indicate clearly that camera surveillance is taking place, for example by placing a warning sign.

7.6 User shall not install cameras or comparable Avonic Products in toilets or changing rooms.

7.7 User shall not install cameras or similar Avonic products in living areas.

7.8 The User shall observe a reasonable retention period for camera images.

7.9 Avonic is not liable for any claims by third parties relating to violation of the GDPR or infringement of privacy. Should it transpire, on the basis of a court decision, that Avonic is still fully or partially liable for claims by third parties in connection with the violation of the GDPR or infringement of privacy, Avonic shall be entitled to recover the amount of the damage and any other associated costs from the User.

7.10 User shall carry out a data protection impact assessment (DPIA) if User intends to carry out any data processing using Avonic Products that is likely to pose a high risk to the privacy of the individuals whose data User processes. User shall identify the privacy risks of a data processing operation in advance and take all available measures to mitigate the risks. Avonic only makes cameras, audio-visual or IT systems available and is in no way responsible for the use of Avonic Products and Services and the Embedded software, nor for assessing the risks to the privacy rights of data subjects in the event of the (intended) use of Avonic Products by User.

7.11 User acknowledges that Avonic Products and Services, whether or not in combination with Embedded Software, are not suitable for use within every network, and that use is not always secure without taking appropriate measures. Avonic recommends that Avonic Products and Services only be used within a closed network, or within a properly secured network. Avonic is not responsible for the network and its security. Avonic is not responsible for the security of the User's network, as Avonic cannot influence this.

8. Controls

8.1 Avonic is entitled to incorporate technical limitations and control mechanisms into Avonic Products and Services in order to prevent abuses and/or to check that the User only uses them in accordance with these Terms of Use.

8.2 Avonic is entitled, either itself or through a third party, announced or unannounced, to carry out checks at locations where the Avonic Products and Services are used, if in the opinion of Avonic there is a serious reason to do so, for as long as a User uses the Avonic Products and Services. User shall ensure that all cooperation and access is provided for this purpose.

8.3 Should the User refuse to cooperate or grant access to Avonic, Avonic is entitled to terminate all agreements with the User, including the granting of the user license, with immediate effect and without being liable for any further compensation. In this case, the User is no longer entitled to use the software of the Avonic Products and Services.

9. Liability

9.1 Avonic is not liable for any breach of laws and regulations involving the use of Avonic Products and/or Services by the Installer or User. Avonic cannot be held liable for the use of its Products by Users and/or third parties. The User hereby indemnifies Avonic in the broadest sense of the word. It is up to the User to comply with all laws and regulations applicable to him.

9.2 Avonic is not liable for damage of any nature whatsoever, unless the liability of Avonic follows from mandatory legal provisions. In the latter case, Avonic shall recover the damage from the User, the Installer or third party who caused the damage through their actions or omissions.

9.3 In all cases where Avonic is required to pay compensation, the total liability of Avonic to the User, under any theory or grounds whatsoever, shall always be limited, insofar as legally permissible, to the net invoice value of the Product, or to that proportion of the net invoice value to which a claim for compensation is directly or indirectly linked. The total compensation owed by Avonic shall under no circumstances exceed € 100,000 per event, whereby a series of related events shall be regarded as a single event.

9.4 Liability for any indirect or consequential damage, including but not limited to loss of profit or loss resulting from late delivery or stagnation and damage resulting from claims by third parties, is expressly excluded.

9.5 All claims against Avonic, except those acknowledged by Avonic, lapse by the mere lapse of 12 months after the claim arose.

9.6 In the event of deliberate intent, gross negligence or deliberate recklessness on the part of Avonic, the limitations on liability in this article do not apply.

10. Code of conduct

10.1 User must use the Avonic Products and Services and/or other facilities offered in a responsible manner. It is prohibited to use the Avonic Products and Services and/or other facilities offered in any way which:

a) damage to the systems of Avonic and/or third parties;

b) may cause or cause disturbances in use.

10.2 It is prohibited to use Avonic Products and Services and/or other facilities offered for illegal practices. This includes, among others, the following actions and behaviour:

a) infringing on the rights of third parties or enabling the infringement of the rights of third parties, such as but not limited to intellectual property rights and privacy rights;

b) failure to comply with the applicable legislation and/or other regulations in this respect;

c) spamming (the unsolicited distribution (or currently enabling third parties to distribute) of advertising messages and other communications);

d) creating/storing/distributing (child) pornography;

e) causing a danger to the functioning of computer systems or networks of Avonic or third parties;

f) sexual harassment, discrimination and/or any other form of harassment;

g) distributing or in any other way making available to third parties obscene, insulting and harassing material and/or other material of a similar nature;

h) making threats;

i) storing and distributing viruses, worms and/or other destructive activities;

j) hacking into the accounts, systems and/or networks of third parties and/or Avonic without permission and/or performing and/or refraining from performing any other act which makes hacking possible.

10.3 Avonic reserves the right to put the Avonic Products and Services and/or the other facilities offered out of use by a User, if, in Avonic's opinion, if required by law or by a court ruling and/or if a third party points out to Avonic and/or suspects that by means of the Avonic Products and Services, the rights of a third party are infringed, or if the obligations arising from these Terms of Use are not complied with, or not complied with properly or in full.

10.4 Avonic shall under no circumstances be liable for damage of any nature whatsoever suffered by User and/or third parties as a result of the measures taken on the basis of the previous paragraph. The User may not invoke a right of suspension.

10.5 Should the seriousness of the actions and/or failure to act by the User justify this, and/or should these continue despite the measures taken by and/or on behalf of Avonic, Avonic and/or the Installer shall have the right to terminate all agreements with the User, without Avonic or the Installer being obliged to pay any compensation in this regard or to refund any monies already paid.

11. Amendment of Terms of Use

11.1 Dutch law applies to all legal relationships of Avonic.

11.2 Avonic is entitled to amend or supplement these Terms of Use.

11.3 The most recent version of these user terms and conditions can be consulted on the website: www.avonic.com/terms-conditions.

12. Contact

To contact Avonic

Tel: +31 15 711 2712

E-mail: info@avonic.com

Mail: Exportweg 11a, 2645 ED, Delfgauw, The Netherlands

Registration for the Avonic Support Service:
www.avonic.com/register

Sign up for the Avonic Product Development Program:
www.avonic.com/register

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INTRODUCTION

Purpose of this Manual

This Manual describes the safety precautions and the instructions for safe installation and operation of the Avonic CamDirector® Teacher Tracker Software. The Avonic CamDirector® Teacher Tracker software is part of the CamDirector® (system): the software, CD500 and cameras.



Use this user manual in combination with the [user manual CD500](#) for a correct [installation](#) and [operation](#) of the Teacher Tracker software. If you have licenses for other Avonic software modules, read the user manuals of these modules as well.

What you need to operate the CamDirector® Teacher Tracker



You need the following products to use the CamDirector® Teacher Tracker Software:

1. 1x AV-CD500 **(separately sold)**
2. 1x AV-CD-TRAC1 CamDirector® Teacher Tracker software license
3. 2x AV-CM70 series cameras **(separately sold)**
4. 1x CAT 6x Ethernet cable **(third party)**
5. 2x PoE CAT 6x cables **(third party)**

Target Audience

This Manual is developed for installation technicians who install and operate the Product at client sites, and for IT professionals who are responsible for operating the Product.

Document Structure

The Manual is subdivided into the following **Chapters**:

1. [Introduction](#)
2. [Product Overview](#)
3. [Mounting and Installation](#)
4. [Operation](#)
5. [Disposal of Software](#)
6. [Troubleshooting](#)
7. [List of Support Articles](#)

The following Appendices can be found at the end of this manual:

- [Appendix A: TCP Settings and Command List](#)
- [Appendix B: HTTP API CamDirector](#)

PRODUCT OVERVIEW

CamDirector® Teacher Tracker Software

Avonic's CamDirector® Teacher Tracker is a unique tracking solution that creates automatic multi camera video registrations of lectures. It can automatically find the teacher in a room with students and provides elegant close-ups of the teacher, even in large lecture halls and auditoriums. The live video output automatically switches between overview shots of the classroom and close-ups of the teacher. With the CamDirector® Teacher Tracker Software Avonic sets the new standard for automated lecture recordings.



Features

From small classrooms to large auditoria

The CamDirector® Teacher Tracker supports perfect tracking of a presenter even in the largest lecture halls and auditoriums.

Hassle-free lectures

The system runs automatically when a lecture starts without the need to wear distracting equipment. Let teachers focus on teaching instead of technology.

Consistent and accurate tracking

By harnessing the strength of the two-camera approach, the CamDirector® 99% of the time provides an accurate and consistent tracking solution.

Track and Switch TV-like experience

CamDirector® Teacher Tracker's close-up camera follows the teacher's movement in a calm and natural way, while the overview camera provides shots of the room to give the viewers the experience of being present.

Privacy Guaranteed

The CamDirector® Teacher Tracker is built around privacy. All image processing is done locally without the need to be connected to the internet. We give you the tools to set privacy settings according to your own standards.

An ever-evolving AI solution

Avonic's patented machine learning algorithms let the teacher tracker improve over time by learning from every lecture it records.

MOUNTING AND INSTALLATION

To use the CamDirector® Teacher Tracker software you need the CD500 and two of the SAME CM70 series camera models. These camera's can be mounted to a wall or tripod using the MT220 mount (see the [MT220 mount](#) for the manual.) This chapter outlines how to connect all the components to the CD500.



Read also the [user manual of the CD500](#) for a correct installation of the CamDirector®.



Take the following precautions to prevent the CD500 from falling down which may cause injuries:

- Set up the CD500 and its cameras on a hard, stable surface, or mount it to a wall or ceiling.
- ONLY use an Avonic mount for mounting to a wall, or tripod.
- Ensure the mounting construction is capable of supporting four times the weight of the cameras and/or the Product. (See '**General Specifications > Weight product**' in the CD500 and/or CM70 series Datasheet for the exact weight.)
- Use a safety loop or drop protection that prevents the CD500 and its cameras from falling if the mounting construction fails.
- During mounting and installation, NEVER install the CD500 and its cameras above a person.
- Check the installation at least once a year. An improper mounting could cause the unit to fall off, resulting in personal injury.

Connecting the components to the CD500



Execute the following steps to connect the components to the CD500:

1. Connect all provided components to the ports at the back of the CD500.

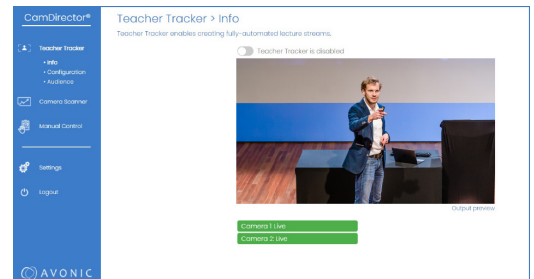
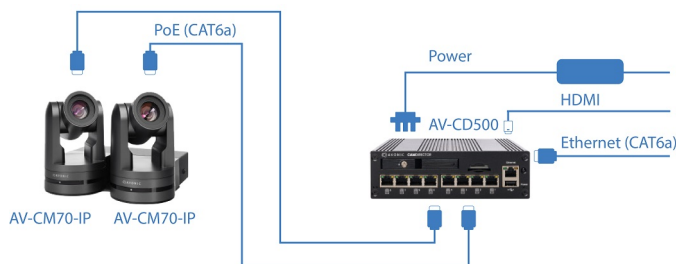


1. RCA port (Audio Line IN) (for future use)
2. RCA port (Audio Line OUT) (for future use)
3. USB3.0 port
4. HDMI 2.0 a/b port
5. RS232 port (for future use)
6. RS485 port (for future use)
7. GPIO Harting, har-flexicon port (for future use)
8. PSU port (to connect the provided power adapter)

2. Connect both CM70 series* cameras using a CAT6x ethernet cable (**NOT** provided in the package contents) to the ethernet ports at the front of the CD500. The figure below shows how to connect all components to the back and front of the CD500. For the video output you need to connect also a HDMI cable to the CD500 and your monitor. For audio you need an USB cable plus USB extenders. Audio will **NOT** work using the RCA ports or the Balanced Audio Ports on the CM70 series cameras!



* The CamDirector® system works **ONLY** with two of the same camera models (two CM70-IP, CM70-NDI, two CM71, or two CM73 cameras)!



After connecting the provided power adapter and the CAT 6 Ethernet cable, the CD500 will start automatically. The CD500 is now ready for set up.

OPERATION

The CamDirector® Teacher Tracker is designed to work with two Avonic CM70* cameras: an overview camera and a follow camera. The software is programmed to use the follow camera to track the speaker by using Pan, Tilt and Zoom functionalities. The overview camera provides a stationary picture of the entire stage. The CamDirector® Teacher Tracker operates locally on the CD500, and an internet connection is only required for updates. This chapter provides guidance on how to use the CamDirector® Teacher Tracker. For the purpose of this chapter, the speaker will be referred to as the teacher. Read also the [AV-CM70 series manual](#) to make yourself familiar with the features of this camera and the [Basic CamDirector tips](#) article on the website.



* The CamDirector® works **ONLY** with two of the same camera models (two CM70-IP, CM70-NDI, two CM71, or two CM73 cameras)! Because of the different field of views it will **NOT** work using two different models.



What you can see in the WebInterface depends on the licenses activated on the CD500. See the [Setting > Status](#) page for the activated licenses on your CD500 and the [Avonic website](#) for the available licenses.

First time usage

First time usage is an addition to the [Quick Guide CD500](#). The steps documented below are in general the same as in the Quick Guide, but are more customized to the Teacher Tracker software. Follow all steps for a correct installation and usage of the Teacher Tracker software.

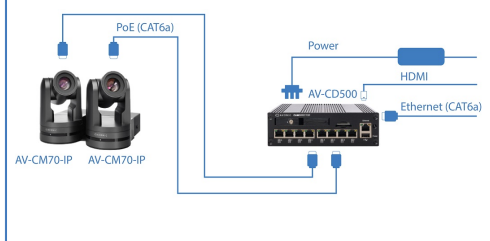
1. Install the Cameras

- To begin: open the box of the CM70 series cameras (see [connecting the components](#)) and follow the Quick Guide. After that follow instructions in this manual.
- Install the cameras to the MT220 mount using the supplied screws. Download the [MT220 manual](#).



2. Connect the CD500

- Connect two cameras using CAT6a cables to the camera ports on the CD500. See [Mounting and Installation](#).
- Connect your computer/ local network to the CD500 using an ethernet cable, configure your ethernet adapter to network segment 192.168.5.xxx
- Connect also a HDMI cable for video output (there is no video output over ethernet). Connect the USB port and USB extenders to use audio (RCA ports and Balanced Audio ports on the cameras will NOT work!)



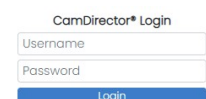
3. Configure the cameras

- Turn on the first camera and configure its network settings according to your local network. Do the same for the other camera. See also the Quick Guide of the CM70 series cameras.
- Set up both camera's exposure and white balance to match the circumstances in the room.
- Take note of the two IP addresses of the cameras, you will need them during installation of the Teacher Tracker.



4. Configure the CD500

- Open a browser. Fill in the default IP address: **192.168.5.50** You can use Google Chrome or Microsoft Edge (no Firefox). Login using the following credentials: Username: **admin** Password: **admin**
- Navigate to [Settings > System](#) and setup the network settings. Add the IP addresses of both cameras.
- Check if the Teacher Tracker License is activated (under Licenses). If not [contact Avonic](#).
- Click Save and Reboot, this will take a couple of minutes. The reboot is finished when the IP address appears on the HDMI connected screen. Refresh the page and continue to the next step.
- Go to [Settings > Status](#),. Check if new firmware is available. If so, update the Teacher Tracker.



5. Calibration

To use the Teacher Tracker, you need to calibrate the software. See [Calibration](#).

Teacher Tracker



You can see this page only with the module **Teacher Tracker** activated. For available licenses check the [Settings > Status](#) page and the [Avonic](#) website.

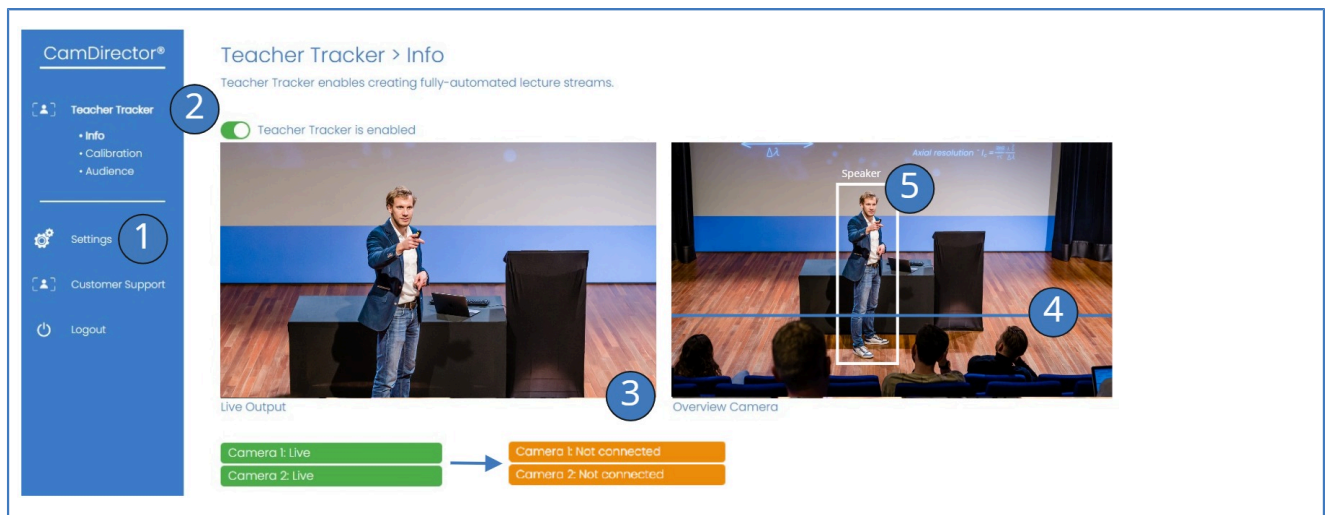
The **Teacher Tracker > Info** page is the starting page of the WebInterface.

On this page you can see:

1. A vertical blue bar at the left side of your screen where you can navigate to different pages.
2. **Teacher Tracker is enabled** toggle button (to turn on the Teacher Tracker).
3. An output preview of both camera's (left: live output = follow camera, right: overview camera). The green camera bars below the output preview will turn from green into orange if the cameras are not connected. You cannot click on them. The only function they have is to show the connection status of the cameras.
4. Audio exclusion line to exclude people you will not want to follow (see [Teacher Tracker > Audience](#)).
5. Who is the speaker.



- For an automatic detection of a person before the camera, you need to pull the Teacher Tracker toggle button at the top of the output preview **(3)** from left to right, making it green.



Teacher Tracker > Calibration

For the CamDirector® Teacher Tracker to function properly, it is crucial to calibrate the software in order to create high quality lecture registrations. This can be done by placing **one person** in the overview area (on stage, room etc). This person can be anyone: teacher, technician, student etc.



1. Click on **Teacher Tracker > Calibration** in the blue bar. You will see the picture below:

For the Teacher Tracker to be able to create high quality lecture registrations, it is crucial to configure the cameras accordingly.

Click on [Start Configuration](#) and you will be guided through the configuration process.

[Start Configuration](#)

Calibration



Before you start the calibration process, take note of the following: **Any changes** made to the camera's position, pan, tilt, zoom, and/or light conditions require **re-calibration** of the Teacher Tracker!



- Calibration can be performed with one person, but it is advisable to conduct the calibration process with two people. One person should be on stage or in the room, while the other person should be positioned behind the computer to provide guidance on where the person on stage or in the room should stand.
- Do not forget to turn ON the cameras before starting the calibration process.



See also [CamDirector®: How to calibrate the Teacher Tracker software](#) on the website. Follow instructions below to calibrate a person before the camera:

1. Click **Start Configuration**.

- Define your stage. Determine the positions where the teacher could stand and configure the Pan, Tilt and Zoom levels of the overview camera until all these positions are in the picture (the software will automatically detect the zoom level for the follow camera during calibration). Make sure that the teacher is in the picture with his or her face and upper body.
- Check in the person to be calibrated is alone in front of the camera. With two or more persons (with their face) before the camera the software is not able to find a detection point and will wait until it has found one.

Overview Camera

Step 1: set the pan, tilt & zoom parameters ①



2. Click **Start Calibration**. At the bottom of the next page a bar appears that is slowly turning full. The number of calibration points will increase during calibration.

Overview Camera

Step 4: calibrate the CamDirector ④



Follow Camera



Calibration Procedure

Current number of calibration points: 4 / 20







3. Choose a position in the room. Wait until the cameras are ready. The camera will blink 4 times red when the calibration is in progress. If a calibration point is found, the camera will blink green.
4. When both cameras are blinking green, the person to be calibrated can move to another position in the room or on stage. Use the **full width** of the room or the stage and take **at least 5 calibration points in a sitting position** on a chair. Repeat this until all calibration points (20) are found and completed.
5. Press the **abort** button if you want to abort the calibration.

6. The camera tally lights will be solid green if the calibration is successful. The software will automatically return to the configuration page.
7. Navigate to [Teacher Tracker > Audience](#) and set the audience exclusion zone. After calibration the Teacher Tracker toggle button is automatically set to ON. You can check this at the [info page](#). The Software is now ready to follow the teacher. You cannot control the PTZ functionality of the camera or see a video output over IP, in the WebInterface of the camera, when the Teacher Tracker toggle button is set to ON.



You can change camera positions during calibration. It is also possible to switch the cameras by switching the IP Addresses at [Settings > System](#). If you do this, **re-calibration is needed!**

Tally light status	Camera tally light	Meaning
Solid red		Cannot find calibration point
4 times blinking red		Calibration point in progress
Blinking green		Calibration point found
Solid green		Calibration successful

Teacher Tracker > Audience

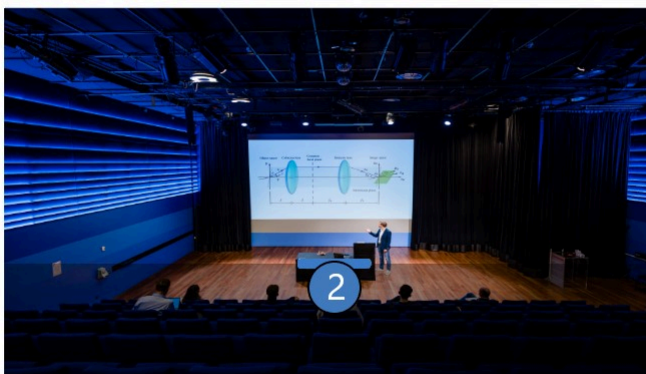
This page is to exclude audience: like students and other people on the foreground. This is needed for the software to follow only the teacher.



Click on the blue bar **(2)** at the bottom of the preview. You can drag the audience exclusion zone up or down to exclude the people you want to exclude. See the picture below:

Setting

Drag the button to set the height of the audience exclusion zone. Make sure that the coloured region does **not** include a zone where the speaker's face and upper body can be found.



Previous value: 8%

New value: 39%

Save New Setting

Settings

This page allows you to modify certain CamDirector® settings, including Camera, Network and Account settings, such as Passwords and Usernames.

Settings > Status

The Status page shows:

- The network addresses (IP, Netmask, Gateway, MAC Address)
- Camera addresses (Overview and Follow Camera)
- A button to reset to Factory Settings
- The Licenses available
- A button to check for and update Software. Re-calibration is unnecessary after updating the CamDirector software to a new version.



An internet connection is required to update the Teacher Tracker software. You can go offline when the update is completed. See also [CamDirector® Firmware Update](#) on the website.

Settings > Status

This page shows the status of the CamDirector system and related products.

CamDirector

Network		Overview Camera	
IP Address	172.26.40.112	IP Address	172.26.40.87
Netmask	255.255.255.0	MAC Address	98:14:D2:22:10:31
Gateway	172.26.40.1		
MAC Address	98:14:D2:22:A0:1C	Follow Camera	
		IP Address	172.26.40.88
		MAC Address	98:14:D2:22:10:2C

[Reset to factory settings](#)

Licenses

Module	Available	From	To
Multishot	Yes ✓	2021-01-01	2099-01-02
Teacher Tracker	Yes ✓	2021-01-01	2099-01-02

[Check for licenses](#)

Software

Version	Date
0.0.0	01-01-1999

[Download latest](#)
[Update now](#)

Settings > Network

The System page can be used to change Camera and Network Settings.

Cameras and Network

Under Settings > Network you can configure the cameras IP addresses and Network settings.

Settings > Network

This is where the CamDirector network settings can be changed.

Cameras

Overview Camera

Follow Camera

Network

☒ Automatic Configuration (DHCP) is enabled

System IP

Netmask

Gateway

[Save changes](#)
[Reboot](#)

1.	Cameras	Camera 1 and 2 IP	To ensure proper system functionality of the Teacher Tracker, it is important to correctly enter the IP addresses of the two identical CM70 cameras in your local network. This can be done by referring to the instructions provided under Operation . If one or both IP addresses are not correct, the CamDirector® will not function properly.
2.	Network	System IP	IP address of the CD500
		Netmask	Netmask address of the CD500
		Gateway	Gateway address of the CD500



Save and reboot the CamDirector® for the changes to take effect.

Settings > Account

Here you can change account settings like Username and Password.

Settings > Account

This is where the username and password can be changed.

Save Changes

Customer Support

This page provides remote customer support services.



1. Click on customer support in the blue bar at the right to enter this page.
2. To enable the VPN feature, ensure that you have an active internet connection. Enable the VPN toggle button. It is worth to notice that the VPN button will automatically turned off after one month.
3. Here you can download log files.
4. Enabling Image Logger allows you to download image log files. You can set also a specific time and date (update the window to refresh the time scheme) as well as a specific time frame to download image logs automatically for a specified period. However, note that the downloaded files can be very large, with a maximum size of 2GB.

CamDirector®

[Teacher Tracker](#)
[MultiShot](#)
[Settings](#)
[Customer Support](#)
[Logout](#)

Customer Support

All of the resources that are used for Customer Support:

VPN

☒ VPN is enabled

Turning on the VPN can only be done with an active internet connection!

Logs

Download Logs

Image Logger

☐ Image Logging is disabled

Start Time: 08:00
 End Time: 20:00
 Days: Mon Tue Wed Thu Fri Sat Sun

Update time window

Start Date: dd/mm/yyyy

End Date: dd/mm/yyyy

Download Images (max 2GB)

To download images, please select a time frame in which to search the logs.

DISPOSAL OF SOFTWARE

If you want to dispose the software and its carrier the CD500, **do NOT forget to delete privacy and personal related data** like user names, passwords, IP addresses and camera names for example. The software is designed to be privacy proof, however the software uses some privacy and personal related data for its correct operation. See also the [user manual CD500](#) at Disposal and Recycling for more information about this subject.

TROUBLESHOOTING

General



1. Turn the CD500 and the CM70 series cameras off and on again and check if the problem persists.
2. If the problem persists after putting the CD500 and the camera off and on again, restore to factory default.

Power Issues



If the CD500 power LED is OFF:

1. Check the net power.
2. Check the power adapter.

WebInterface



Check this if you cannot enter the WebInterface:

1. Use an **incognito** window in your browser, sometimes cache issues arise when using multiple devices that have the same default IP address.
2. Reset to factory default.
3. See also [CamDirector®: Why Teacher Tracker is not switching](#) on the website, if the Teacher Tracker software will not switch to a follow or an overview shot.

No Image / no preview of the image in the WebInterface



1. Check the power of the camera and monitor.
2. Check if the cameras are connected to the same subnet as the CD500.
3. Check the quality and length of the CAT 6a cables of the CD500.
4. Check if the video specifications of your monitor matches the specifications of the cameras.

Tracking Issues



1. Check if the cameras are two **Identical** CM70 series camera models (two CM70-IP, two CM70-NDI, two CM71, or two CM73 cameras).
2. Check the configuration of the cameras: exposure and white balance to match the light conditions in the room and changes to the pan, tilt and zoom levels of the cameras.
3. Check if the IP addresses of the cameras are switched. If so, re-calibrate the Teacher Tracker software.
4. Check the Teacher Tracker toggle button in the WebInterface. See [Teacher Tracker](#) on page 18.
5. Check if the [audience exclusion zone](#) is not above the upper body and or face of the teacher. If it is, the teacher will also be excluded and cannot be detected by the Teacher Tracker.



It is advisable not to wear light clothes against a light background or dark clothes against a dark background.

LIST OF SUPPORT ARTICLES

This list provides links to different support articles on the Avonic website to help you to understand the CamDirector®.

Settings:

- [CamDirector®: Audience exclusion](#)
- [CamDirector®: Calibration tally light status](#)
- [CamDirector®: How to calibrate the Teacher Tracker software](#)
- [Basic CamDirector® tips](#)

FAQ (Frequently Asked Questions):

- [CamDirector®: Are PIP, logo or name overlay supported?](#)
- [Can the CD500 be used for other purposes?](#)
- [Can the CD500 controller be set to DHCP?](#)
- [CamDirector®: Can the cameras be controlled manually?](#)
- [CamDirector®: Can the cameras be approached individually?](#)
- [CamDirector®: Different camera support?](#)
- [CamDirector®: Is a direct connection to the cameras mandatory?](#)
- [CamDirector®: Is the tracking speed and zoom adjustable?](#)
- [CamDirector® Teacher Tracker software and AI Processing Unit](#)
- [CamDirector®: Which video format?](#)
- [CamDirector®: Will NDI be supported?](#)
- [CamDirector® License FAQ](#)

Maintenance:

- [CamDirector®: Firmware releases](#)
- [CamDirector®: Firmware update instructions](#)

Troubleshooting:

- [CamDirector®: How to reset the Teacher Tracker software?](#)
- [CamDirector®: Why Teacher Tracker is not switching?](#)

Quick Start Guide

- [CamDirector® Quick Start Guide](#)
- [CamDirector®: Teacher Tracker web GUI](#)
- [How to mount and configure CamDirector Teacher Tracker](#)

Control

- [CamDirector® Control Solutions](#)
- [Control the CamDirector with a Stream Deck using Bitfocus Companion](#)

TCP SETTINGS AND COMMAND LIST

TCP is a professional camera control protocol used with PTZ cameras and can be used in combination with the CamDirector® Teacher Tracker. It works by sending commands to the CamDirector® over an IP connection, in return the camera sends ACK acknowledgment and COM completion answers to let the sender know the commands have been received and completed. The [list](#) below describes the commands, ranges and CamDirector® answers. The TCP Settings and Command list is available as a separate document and as an appendix in the Teacher Tracker user manual that you can download on the [product website](#).

TCP over IP

Avonic CamDirector® is implemented with a TCP server. The TCP port is **1260**. (Different to CM70 port!)



The default TCP address setting is **always 1** when using TCP over IP. As all CamDirectors® are uniquely identified by their IP address, all TCP addresses are set to 1, the serial addressing plays no part. For TCP over IP, every command starts with **81 xx xx xx**.



To control the camera, you need an TCP supported application, like **Hercules SETUP utility** or **Packet Sender** for example. Follow the instructions below:

1. Open the TCP supported application.
2. Fill in the camera's IP Address, TCP port number and connect the application to your camera. Once the connection between client and server is set up, the client will be able to send PTZ commands to the server. The server then parses and executes the PTZ command.
3. Fill in the command to be sent to the camera. The camera will send you the return commands.
4. If you see the returned commands, the camera has executed the command. You can check this in the WebInterface of the camera.

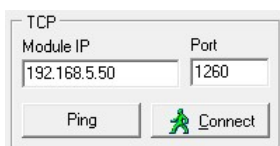


Default settings: TCP port **1260** / TCP **address 1**

The pictures below are showing an example of a TCP command (Focus near) with their return commands. The green RX commands in the picture "Receive message" is the ACK command (to let the sender know that the command is received and executed) and the COM command (to confirm that the command has been successfully executed and completed). You can find these commands in the [CamDirector® Return Commands](#) list and [CamDirector® Control Commands](#).

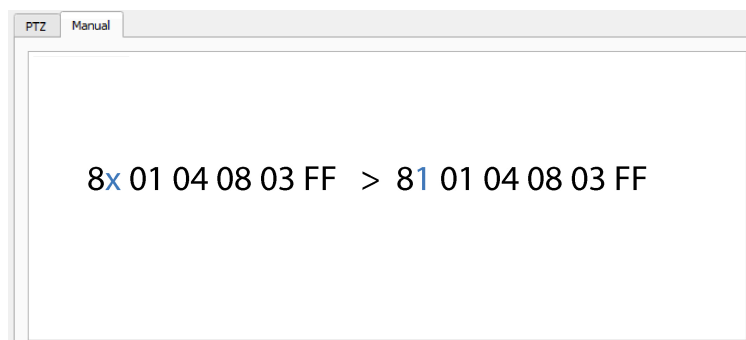


The images below are provided as an example to demonstrate the functionality of a TCP-supported application. Your application may differ in appearance from the images shown.



A screenshot of a software window titled "TCP". It contains two input fields: "Module IP" with the value "192.168.5.50" and "Port" with the value "1260". Below these fields are two buttons: "Ping" and "Connect". The "Connect" button has a green network icon next to it.

TCP IP address and port



A screenshot of a software window titled "PTZ" with a "Manual" tab. The main area of the window displays a command sequence: "8x 01 04 08 03 FF > 81 01 04 08 03 FF". The "81" in the second sequence is highlighted in blue.

TCP command example

Receive message

Clear

TX: 81 01 04 08 03 FF (11:33:44.785)
RX: 90 41 FF (11:33:44.791)
RX: 90 51 FF (11:33:44.844)

CamDirector® Return Commands

All parameter values are in HEX.

- y = Socket Number



To use the **Teacher Tracker commands**, it is essential to have the (newest) CamDirector® Teacher Tracker software installed. Update your CamDirector® Teacher Tracker to version 1.05 or higher. Webinterface - **Settings > Status > Firmware** and **check for new firmware**. Click the **update now button**.

Return/complete Command

Command	Function	Command Packet	Comments
ACK/Completion Messages	ACK	90 4y FF (y: Socket No.)	Return when the command is accepted.
	Completion	90 5y FF (y: Socket No.)	Return when the command has been executed.

Error Command

Command	Function	Command Packet	Comments
Error Messages	Syntax Error	90 60 02 FF	Returned when the command format is different or when a command with illegal command parameters is accepted.
	Command Buffer Full	90 60 03 FF	Indicates that two sockets are already being used (executing two commands) and the command could not be accepted when received.
	Command Canceled	90 6y 04 FF (y: Socket No.)	Returned when a command which is being executed in a socket specified by the cancel command is canceled. The completion message for the command is not returned.
	No Socket	90 6y 05 FF (y: Socket No.)	Returned when no command is executed in a socket specified by the cancel command, or when an invalid socket number is specified.
	Command Not Executable	90 6y 41 FF (y: Execution command Socket No. Inquiry command: 0)	Returned when a command cannot be executed due to current conditions. For example, when commands controlling the focus manually are received during auto-focus.

CamDirector® Control Commands

All parameter values are in HEX

- x = CamDirector® TCP over IP Address



To use the **Teacher Tracker commands**, it is essential to have the (newest) CamDirector® Teacher Tracker software installed. Update your CamDirector® Teacher Tracker to version 1.05 or higher. Webinterface - **Settings > Status > Software** and **download new software**. After that click the **update now button**.

Privacy Mode	Enabling the Privacy Mode will display a black screen with the Avonic logo on the monitor, providing the teacher with privacy.
Manual Control	Enabling Manual Control allows you to control the follow and overview cameras manually, and switch between their video streams. To control the cameras manually, you can access the WebGUI of the camera or use a camera controller. However, it's important that the cameras cannot be controlled directly through the Teacher Tracker WebInterface. Manual Control is only available when the Tracking function is set to OFF. Even when the Tracking function is OFF, you will still be able to view the output from the overview camera.
Tracking	Enabling this mode will activate the tracking functionality. However, to track the teacher, you must also disable the Manual Control Mode.
MultiShot	Enabling MultiShot allows you to switch cameras. If the Teacher Tracker is in use, only the follow camera (camera 2) and additional cameras (camera 3, 4, etc.) can be switched. The MultiShot software can also be rebooted or its status can be retrieved.

Camera Control Commands			
Command	Function	Command Packet	Comments
Privacy_Mode	On	8x 00 01 6F 01 FF	Privacy Mode ON
	Off	8x 00 01 6F 00 FF	Privacy Mode OFF
Manual_Control	Start	8x 01 01 6F 01 FF	Manual Control ON
	Stop	8x 01 01 6F 00 FF	Manual Control OFF
	Switch streams	8x 01 01 6F 02 FF	Switch streams overview and follow camera during manual control (Teacher Tracker command)
* Tracking	Start	8x 02 01 6F 01 FF	Tracking ON
	Stop	8x 02 01 6F 00 FF	Tracking OFF
* MultiShot	Start	8x 20 01 04 00 02 FF	MultiShot ON
	Stop	8x 20 01 04 00 03 FF	MultiShot OFF
	Switch to preset	8x 20 01 04 3F 02 <pp> FF	Switch to the preset defined by pp. pp is in the range of 01-80 (hex) or 1-128 (dec)
	Reboot	8x 20 0A 01 06 01 FF	Reboots MultiShot
	Return Status	8x 20 09 04 00 FF	Returns Status MultiShot

* You need a license to use the commands of these software modules. Check [Settings > Status > Licenses](#) in the WebInterface for the licenses you purchased.

HTTP API CamDirector®

With the HTTP API you can control the CamDirector® Teacher Tracker by using a web browser like Microsoft Edge or Google Chrome for example. It is possible to change multiple settings at once using this feature.

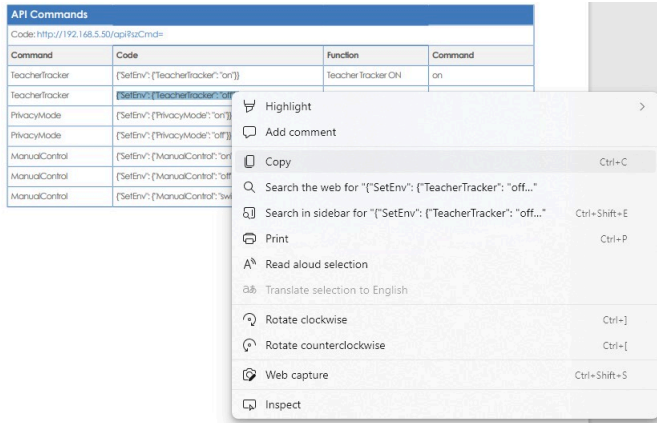
How to use HTTP API

To use the HTTP API you need the following link: <http://192.168.5.50/api?szCmd=>



Follow instructions below:

1. **Click right** and click (left) to COPY the link.



2. Paste the link in your browser like this (Note that all the brackets are replaced by percentages. This is normal, ignore it):

<http://192.168.5.50/api?szCmd={%SetENV{%TeacherTracker%:%on%}}>

3. Change the settings in the link. In this case:

<http://192.168.5.50/api?szCmd={%SetENV{%TeacherTracker%:%on%}}>

4. Press **ENTER**. If **correct**, you get in return:

```
{%body%:{},%message%:"Enabling Teacher Tracker was succesful"}
```

If **failed**, you get in return.

```
{%body%:{},%message%:"Enabling Teacher Tracker was unsuccessful"}
```

5. In case of a failed return, check the following:
 - No long white spaces between the key values of the code. For example this "code" is error and this "code" is right.
 - If you have typed the correct IP address of the camera.
 - Typing errors in the code.
6. Once you have made the changes, you can confirm the updated settings in the WebInterface of the CamDirector.

HTTP API list



To use the **Teacher Tracker commands**, it is essential to have the (newest) CamDirector® Teacher Tracker software installed. Update your CamDirector® Teacher Tracker to version 1.05 or higher. Webinterface - **Settings > Status > Firmware** and **check for new firmware**. Click the **update now button**



Example of full code: `http://192.168.5.50/api?szCmd={"SetENV":{"TeacherTracker":"on"}}`. 192.168.5.50 is the default IP address of the CamDirector® CD500. Fill in the IP address of **YOUR** CamDirector® CD500!

Privacy Mode	Enabling the Privacy Mode will display a black screen with the Avonic logo on the monitor, providing the teacher with privacy.
Manual Control	Enabling Manual Control allows you to control the follow and overview cameras manually, and switch between their video streams. To control the cameras manually, you can access the WebGUI of the camera or use a camera controller. However, it's important that the cameras cannot be controlled directly through the Teacher Tracker WebInterface. Manual Control is only available when the Tracking function is set to OFF. Even when the Tracking function is OFF, you will still be able to view the output from the overview camera.
Tracking	Enabling this mode will activate the tracking functionality. However, to track the teacher, you must also disable the Manual Control Mode.
MultiShot	Enabling MultiShot allows you to switch cameras. If the Teacher Tracker is in use, only the follow camera (camera 2) and additional cameras (camera 3, 4, etc.) can be switched. The MultiShot software can also be rebooted or its status can be retrieved.

API Commands			
Command	Code	Function	Command
* TeacherTracker	<code>http://192.168.5.50/api?szCmd={"SetEnv":{"TeacherTracker": "on"}}</code>	Teacher Tracker ON	on
* TeacherTracker	<code>http://192.168.5.50/api?szCmd={"SetEnv":{"TeacherTracker": "off"}}</code>	Teacher Tracker OFF	off
PrivacyMode	<code>http://192.168.5.50/api?szCmd={"SetEnv":{"PrivacyMode": "on"}}</code>	Privacy Mode	on
PrivacyMode	<code>http://192.168.5.50/api?szCmd={"SetEnv":{"PrivacyMode": "off"}}</code>	Privacy Mode	off
ManualControl	<code>http://192.168.5.50/api?szCmd={"SetEnv":{"ManualControl": "on"}}</code>	Manual Control ON	on
ManualControl	<code>http://192.168.5.50/api?szCmd={"SetEnv":{"ManualControl": "off"}}</code>	Manual Control OFF	off
ManualControl	<code>http://192.168.5.50/api?szCmd={"SetEnv":{"ManualControl": "switch"}}</code>	Manual Control Switch between follow and overview camera	switch
* MultiShot	<code>http://192.168.5.50:3002/switch/on</code>	MultiShot ON	on
* MultiShot	<code>http://192.168.5.50:3002/switch/off</code>	MultiShot OFF	off
* MultiShot	<code>http://192.168.5.50:3002/switch/<int:preset></code>	Switches to a preset stored in the database. Can be accessed with the preset given in the url (e.g. switch/0, switch/1 etc.)	switch/ preset
* MultiShot	<code>http://192.168.5.50:3002/switch/reboot</code>	Reboot MultiShot	reboot
* MultiShot	<code>http://192.168.5.50:3002/switch/status</code>	Gets the status of the MultiShot. Returns {"playing":bool}	status

* You need a license to use the commands of these software modules. Check [Settings > Status > Licenses](#) in the WebInterface for the licenses you purchased.

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