

Software para **FreeDV** más vídeo

El software requerido para agregar vídeo a voz digital

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Consulte la página "Funcionamiento" para conocer la configuración y los ajustes del software FreeDV plus Video.

Haga clic en el enlace a continuación para abrir la página de configuración del software heredado (recomendado para PC más antiguas con capacidad de procesador limitada; requiere una tarjeta de sonido USB adicional).

[Página de configuración del software heredado](#)

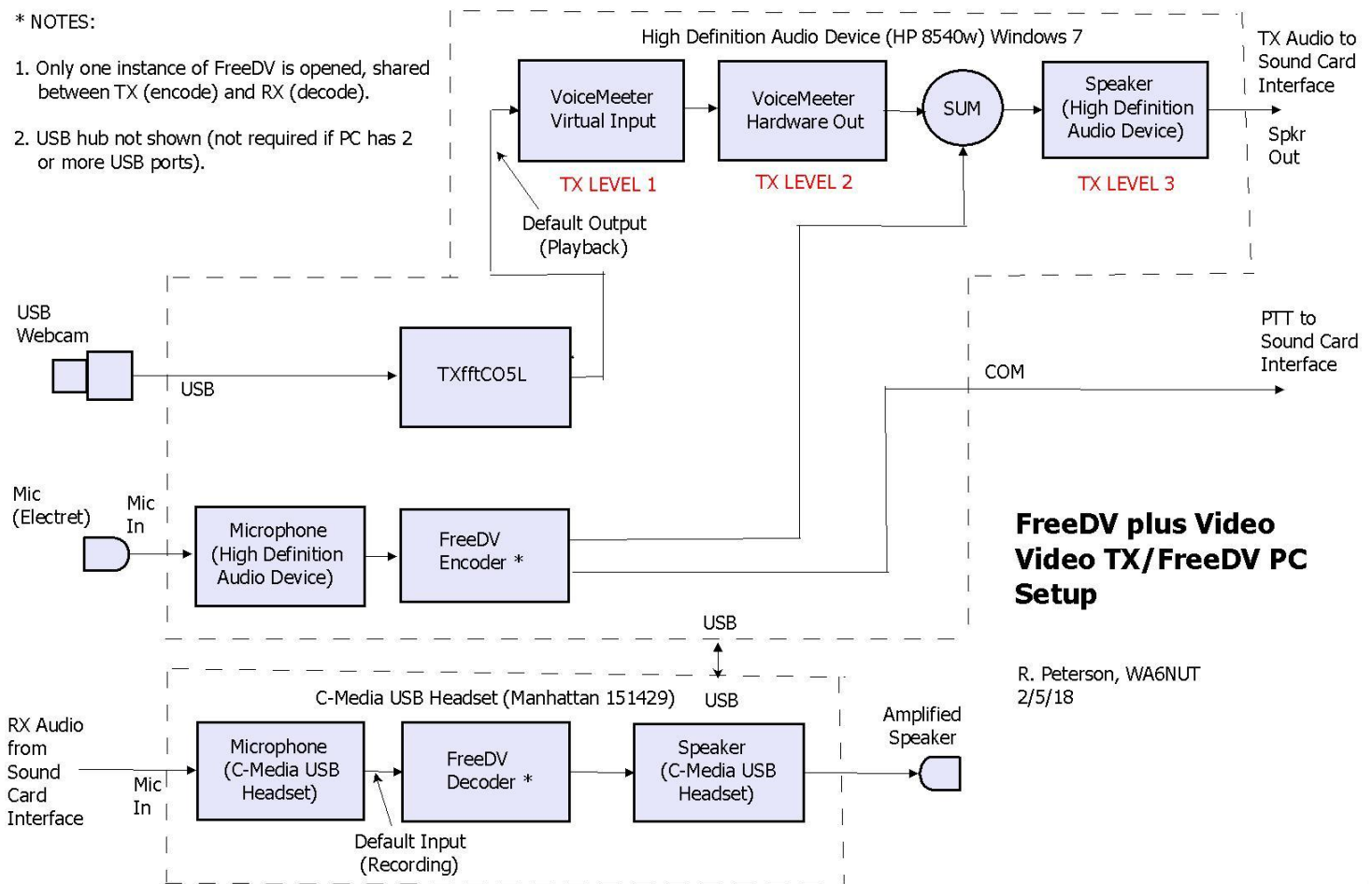
Configuración de **FreeDV plus Video: Software Video TX/FreeDV**

Cuando hay disponible una PC de mayor rendimiento, el software Video TX, FreeDV y Video RX se instalan en la misma PC. De lo contrario, se utilizan dos PC: una para Video TX/FreeDV y la otra para Video RX.

Diagrama de flujo de señales: a continuación se muestra un diagrama de flujo de señales de software.

* NOTES:

1. Only one instance of FreeDV is opened, shared between TX (encode) and RX (decode).
2. USB hub not shown (not required if PC has 2 or more USB ports).



FreeDV plus Video Video TX/FreeDV PC Setup

R. Peterson, WA6NUT
2/5/18

VoiceMeeter Virtual Mixer: FreeDV plus Video usa VoiceMeeter para monitorear dos entradas de hardware, una entrada virtual y una salida de hardware; y controlar los niveles de entrada virtual y salida de hardware. Descargue VoiceMeeter desde el siguiente enlace.

Enlace

de VoiceMeeter FreeDV: Para transmitir, este software codifica la señal de voz analógica y genera el componente de voz multiportadora de la señal FreeDV plus Video. El Mezclador de reproducción de Windows se utiliza para sumar la señal de voz multiportadora con la señal de vídeo multiportadora. Además, el software FreeDV procesa el componente de voz multiportadora de la señal recibida y decodifica la señal a voz analógica. El modo FreeDV "1600" o "700D" se utiliza para FreeDV plus Video. Haga clic en el enlace siguiente para acceder al sitio web de FreeDV, desde el que se puede descargar el software FreeDV (v.1.3). En "Descargar", haga clic en "Instalador de Windows de 32 bits" en la página de FreeDV (también se incluye un enlace para la versión anterior 0.97.1, el modo FreeDV "1400").

Este software, parte de la suite FreeDV plus Video, procesa video de cámara web en vivo o video de archivo AVI grabado y genera el componente de video multiportadora de la señal de FreeDV plus Video. Esta señal se suma a la señal multiportadora FreeDV para formar la señal

compuesta FreeDV plus Video. El control deslizante "Ganancia del atenuador" de entrada virtual del VoiceMeeter (NIVEL 1 de TX en el diagrama de configuración anterior) y el control "Ganancia del atenuador" de salida del hardware (NIVEL 2 de TX) se ajustan para establecer la amplitud de las subportadoras de video con respecto a la amplitudes fijas de la subportadora FreeDV. El nivel de reproducción de la tarjeta de sonido de la placa base (TX LEVEL 3) se ajusta para establecer la potencia de salida de TX del transceptor. Esta señal de banda base compuesta aparece en la salida de la tarjeta de sonido de la placa base. Haga clic en el enlace a continuación para descargar la suite FreeDV plus Video.

Enlace FreeDV plus Video (1600 o 700D) - - Enlace FreeDV plus Video (1400) anterior

Las instrucciones para los ajustes de nivel y otras configuraciones para estas aplicaciones se encuentran en la página "Funcionamiento" de este sitio web.

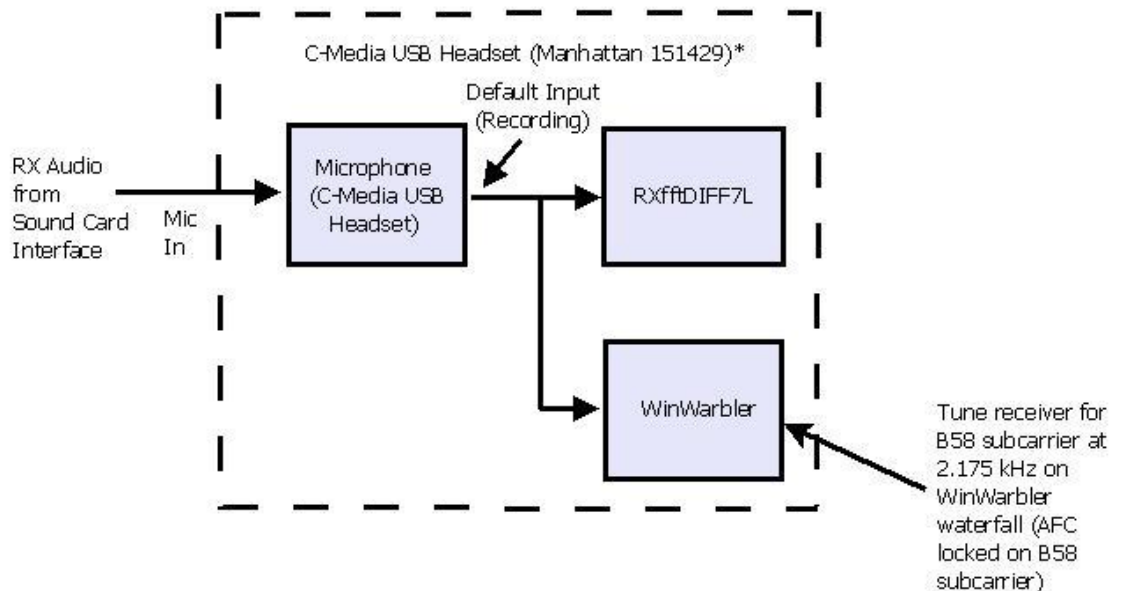
Suma de las señales de vídeo (TXfftCO5L) y de banda base FreeDV: adscribe el proceso de suma:

1: The baseband video (TXfftCO5L) signal path: This signal appears at the "Speakers" output of the motherboard sound card, summed with the FreeDV signal. The amplitude of the video sub carriers can be adjusted using the VoiceMeeter Virtual Input and Hardware Out "Fader Gain" slider controls. Because the VoiceMeeter Virtual Input is set as the default (Playback) output, the video signal appears at the VoiceMeeter Virtual Input (the TXfftCO5L software is designed so that its output appears at the default output).

2: The baseband FreeDV signal path: This fixed-amplitude signal also appears at the "Speakers" output of the motherboard sound card, summed with the FreeDV signal, as a result of a setting in the FreeDV software (under "Audio Configuration").

Setup for FreeDV plus Video: Video RX Software

Signal flow diagram: A software signal flow diagram is shown below.



* NOTE:

1. A single USB sound card is used for both the FreeDV RX (decode) and video RX functions.

FreeDV plus Video Video RX PC Setup

R. Peterson, WA6NUT
5/3/18

RXfftDIFF7L: This software, part of the FreeDV plus Video suite, processes and displays the video component of the composite FreeDV plus Video signal. The download link for the FreeDV plus Video suite is given above.

WinWarbler: This software provides a waterfall display with AFC tracking useful for tuning the video component of the composite FreeDV plus Video signal. Click the link below to access the website from which the WinWarbler software can be downloaded.

WinWarbler Link

Instructions for level adjustments and other settings for these applications are found on the "Operating" page of this website.

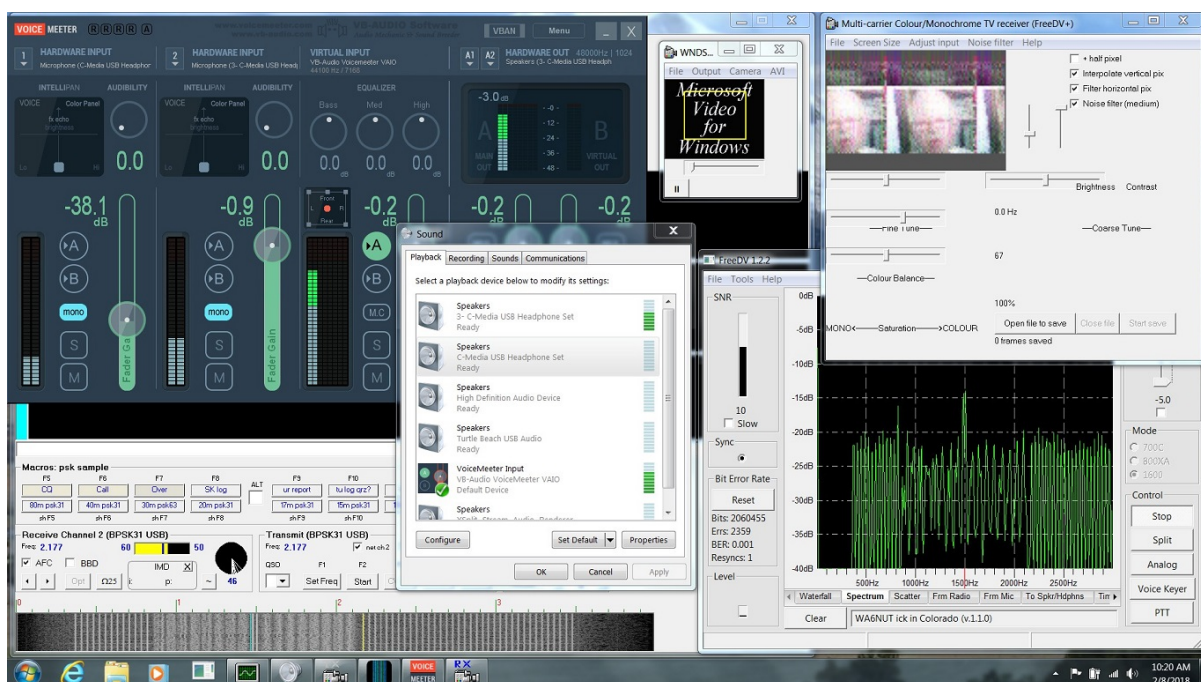
Screenshot (when a single PC is used): The screenshot below shows, starting clockwise from the upper left-hand corner:

- VoiceMeeter: Used to monitor inputs and outputs and to adjust video level with respect to FreeDV level
- TXfftCO5L: Used to generate video component of FreeDV+ signal
- RXfftDIFF7L: Used to process and display received video
- FreeDV: Used to encode mic audio and generate FreeDV component of FreeDV+ signal, also to decode FreeDV signal for output to speakers
- WinWarbler: Used to adjust transceiver RX tuning for best video quality
- Windows: Used to monitor and set audio levels

Sound
(center):

The station is receiving voice and video from WA6NUT (see the text box on the FreeDV GUI). Video is being displayed on the RXfftDIFF7L GUI. The station is ready to send a recorded AVI file (the Microsoft WNDSURF1.AVI test file) back to WA6NUT. The VoiceMeeter Hardware 2 bargraph display is monitoring the mic level to the FreeDV encoder. The VoiceMeeter Hardware 1 bargraph display is monitoring the receiver audio level into the FreeDV decoder. Click the link below for the YouTube version. Mouse over the screenshot to enlarge.

[YouTube Link](#)



Screenshot of PC running Video TX, FreeDV and Video RX software (Windows 7)

Batch File: The screenshot above shows FreeDV+ running with six apps. With a batch file, all the apps can be opened simultaneously, with just a double-click on an icon (shortcut) on your PC's desktop. Click on the link below to find how to do this (it's not difficult).

[Batch File Link](#)

Test Signal: If you've followed the instructions on the "Hardware" and "Software" pages, you're almost ready to get on the air with FreeDV+. But first, you might want to check out your receiving setup with a special test WMA file simulating a received FreeDV+ signal. Click on the link

below for instructions.

[Test Recording Link](#)

Screenshot (when separate PC's are used): A screenshot of the FreeDV and TXfftCO5L applications running on the Video TX/FreeDV PC, together with the VoiceMeeter Virtual Mixer, is shown below. The station is receiving voice and video from WA6NUT (see the text box on the FreeDV GUI). Video is being displayed on the other PC. The station is ready to send a recorded AVI file (the Microsoft WND SURF1.AVI test file) back to WA6NUT. The VoiceMeeter Hardware 2 bargraph display is used to monitor the mic level to the FreeDV encoder. The VoiceMeeter Hardware 1 bargraph display is used to monitor the receiver audio level into the FreeDV decoder. Click the link below for the YouTube version. Mouse over the screenshot to enlarge.

[YouTube Link](#)

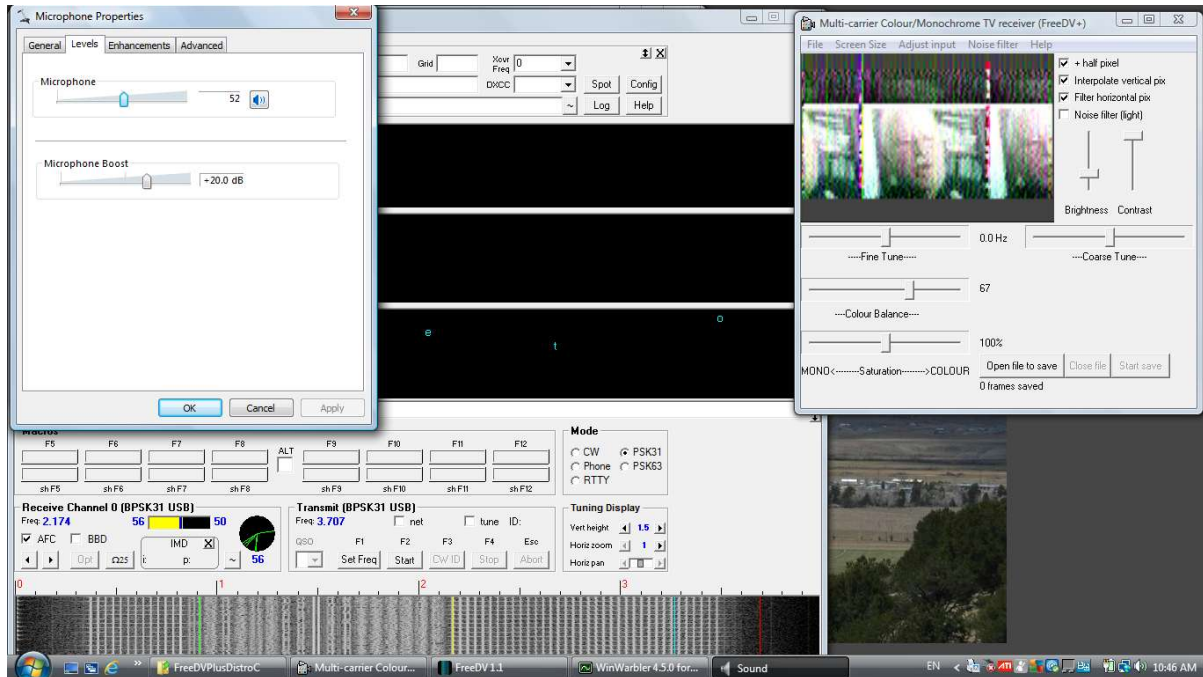


Screenshot of Video TX/FreeDV PC running FreeDV and TXfftCO5L software, with VoiceMeeter in the background (note that "Crystal WDM Audio" is the name of the motherboard sound card driver used in the PC running Windows XP).

Screenshot (when separate PC's are used): A screenshot of the RXfftDIFF7L and WinWarbler applications running on the Video RX PC, along with the Windows Record (Microphone) mixer, is shown below. The video image from WA6NUT is displayed on the RXfftDIFF7L GUI. The frequency of the sub-carrier highlighted in yellow on the waterfall is displayed on the WinWarbler GUI as 2.174

kHz. The WinWarbler AFC is locked to this sub-carrier, and the AFC frequency readout is used to accurately tune the video signal. The Windows Record (Microphone) mixer Level slider control is used to set the correct receiver signal level into the RXfftDIFF7L and WinWarbler applications. Click the link below for the YouTube version. Mouse over the screenshot to enlarge.

YouTube Link



Captura de pantalla de Video RX PC que ejecuta RXfftDIFF7L y el software WinWarbler (Windows Vista)

- 20 de julio de 2013 -

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(Buscar en todo el sitio desde la página de inicio)