

Non-Intrusive Record,  
Analyze E1 Call

Analyze MFC- R2 Digits

PC Based Portable Systems

View Calls in Time, Spectral,  
or Spectrogram Modes

Analyze Signaling Protocols

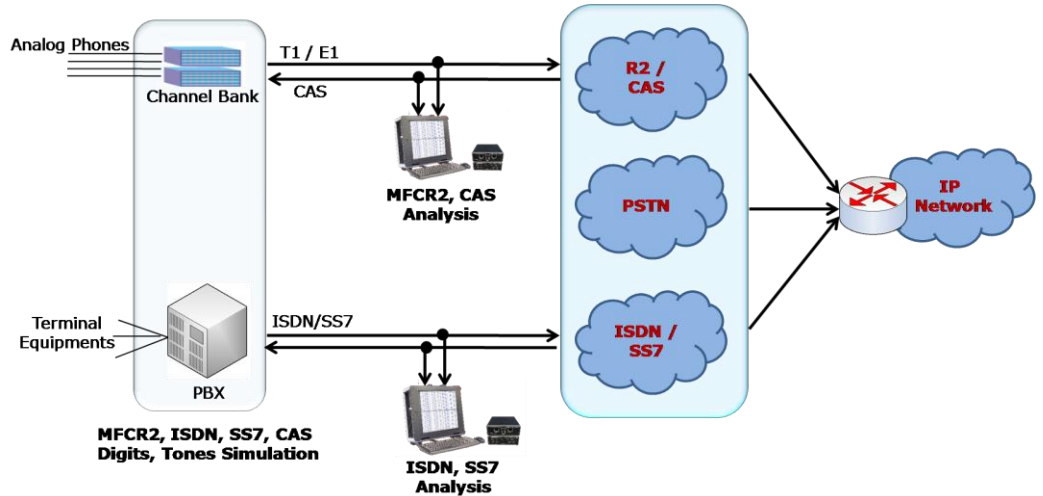
ISDN, CAS, and SS7  
Triggering with Filtering  
Options

Customized File Naming  
Convention

Post Analysis with  
Customized Software

Ability to Parse CAS Digits

## MFC-R2 Capture and Analysis



### Overview

The MFC-R2 Call Capture and Analysis Software (XX070) provide the capability to non-intrusively record calls directly from E1 lines. The system uses HD T1 or E1 PCI Cards, or GL's Portable USB based Dual T1 or E1 Laptop Analyzer to interface non-intrusively with E1 lines. Calls can be manually captured or automatically triggered for capture from both directions (east and west) of transmission. For auto scanning, ISDN, SS7 and CAS (R1, wink start, MFC-R2) signaling, and tone triggers are supported.

Subsequently, captured calls can be played back and analyzed in time and spectral modes using a commercial sound card, built-in high fidelity speakers, and audio viewing software (Adobe Audition, Goldwave, and so on).

Typical Applications are:

- Call recording for post analysis
- Analysis of single/dual tones, DTMF and MF digit analysis (frequency, power, duration)
- Analysis of call quality (speech levels, noise levels, echo return loss, speech clipping, impulse noise, and other impairments)
- Call activity, call density, and call volume analysis
- Monitoring and recording ISDN, SS7, and CAS calls
- Sorting of Calls by "called" and "calling" number

Other Features:

- Call Capture & Analysis application records the calls, either automatically or manually and stores the data in files
- "Call filtering" feature is used to capture calls with a user-defined called and calling numbers rather than all calls
- Various 'File Naming' conventions based on the type of capture. The file naming conventions suit various types of capture applications such as MFC-R2, signaling, ISDN capture, manual captures and so on.
- All call data are captured including signaling bits, voice-band data, and signaling protocol data (e.g. DTMF or MF digits)
- Digit-parsing feature of CCA application helps to distinguish CAS R1 or MFC-R2 calls by prefixing called or calling numbers to the filename.
- ISDN calls are recorded with CRV, ISDN message type, channel, and direction, called and calling numbers. ISDN calls can be captured with customized called and calling number filter
- Enhanced application includes call capture based on SS7 signaling messages, and the ability to set triggering to capture calls when any SS7 signaling messages are received.

For more details, please visit our web page [http://www.gl.com/mfcr2analysis\\_emulation.html](http://www.gl.com/mfcr2analysis_emulation.html)



# GL Communications Inc.

818 West Diamond Avenue - Third Floor. Gaithersburg, MD 20878 • (V) 301-670-4784 (F) 301-670-9187

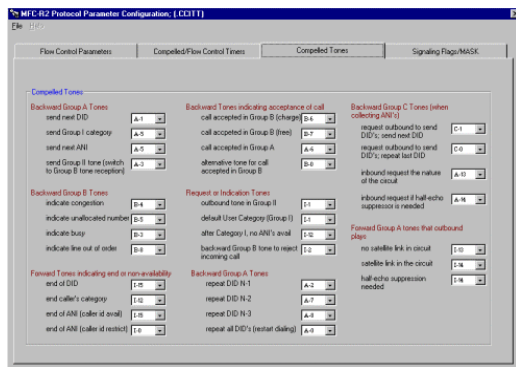
Web Page Address: <http://www.gl.com> • E-Mail Address: [info@gl.com](mailto:info@gl.com)

## Call Capture & Analysis (CCA)-(XX030)

The MFC-R2 Call Capture & Analysis application is used to initiate recording of calls, either automatically or manually. The signaling bits status/ frequency/power of the East and West directions can be shown in real-time for all the channels in both directions. Scanning mode is possible wherein all 30 channels are scanned for call initiation and recording.

### R2 Tabular Analysis

A special DOS application is provided for MFC-R2 digit analysis (r2ana.exe). With this software captured files can be analyzed for R2 tones and signaling. Forward and backward paired tones are detected and displayed with time stamped indications of digit durations and signaling changes.

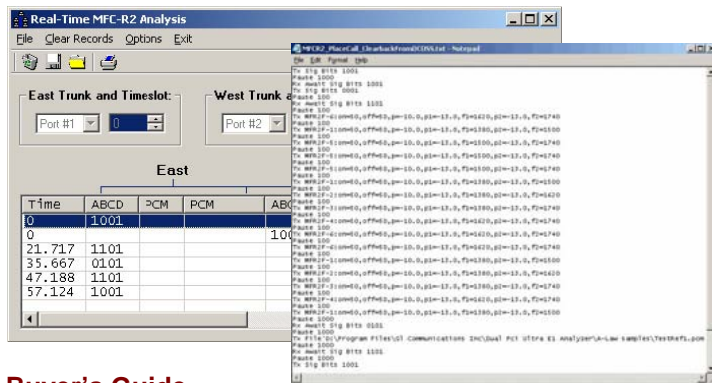


## Signaling Bits Recorder Software (XX050)

This software provides time stamped indications of all signaling bit changes. User has the choice of recording the data from selected channels or from all the channels.

### Strip Chart Application (XX024)

Real-time graphical application captures signaling as well as PCM data. Timing relationship of signaling bits and MFC-R2 digits is easily viewed and analyzed.



### Buyer's Guide

[XX070](#) E1 MFC-R2 Call Capture & Analysis Software & accessories

[XX050](#) Signaling Bits Recorder

[DR001](#) DCOSS High Capacity MFC-R2 emulation

[XX024](#) Real-Time Strip Chart

[XX020](#) Record/Playback File Software

[XX022](#) DTMF/MF/MFC-R2 Detector and Generator Software

[XX600](#) Basic Client/ Server Scripted Control Software

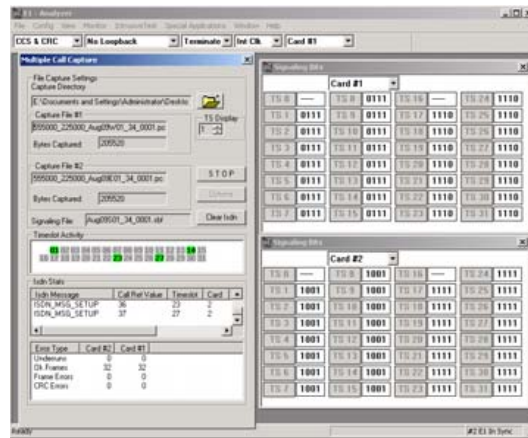
[XX620](#) w/ DTMF/MF/MFC-R2 + answer/place call capability

[XX625](#) CAS Simulator

[SA048](#) Goldwave Software

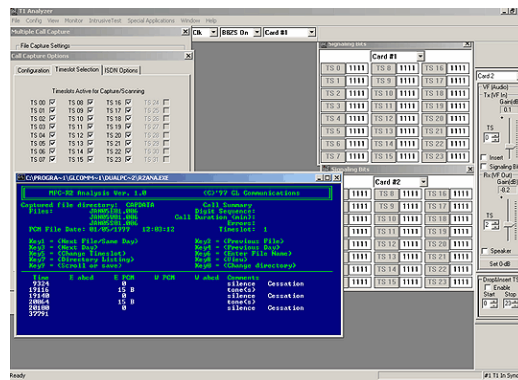
[SA026](#) Adobe Audition Software

\*Specifications and features subject to change without notice



## DCOSS - High Capacity MFC-R2 emulation solution (DR001 with Related Hardware)

The Digital Central Office Switch Simulator (DCOSS) is ideal for simulating and testing advanced telecom networks and products, including switches, gateways, and transmission systems. It is also widely used for verifying T1/E1 signaling protocols such as T1 CAS (R1, Loopstart, Ground Start, Feature Group D, Immediate Start), E1 CAS (R1, MFC-R2, Digital E&M, European Digital CAS), PRI ISDN, SS7 and SS5



## Basic Client Server Scripted Control Software (XX600)

WCS performs real time recording and transmission to/from files, dtmf/mf/mfc-r2 digit detection and generation, bit error rate testing, alarm monitoring, and Digital Signal Processing (DSP) operations, from multiple client locations.

### w/ Transmit/Detect Digits (XX620)

Digit detector configuration file option detects and reports DTMF/MF/MFC-R2 digits on channels as they occur. HD cards have the ability to transmit and detect digits on all the timeslots.

### w/ Channel Associated Signaling Simulator (XX625)

CAS simulator is a client-side application that works along with the T1/E1 Analyzer. It can simulate and analyze any user-defined CAS protocols by providing signaling bit transitions and forward/backward frequency tones/digits.

### w/ VB Client

VB client's MFC-R2 Analysis application is used to analyze R2 signaling on E1 trunks and R1 signaling on T1 trunks in real-time.