

Header

```
fFileSignature = b'ABF2'  
fFileVersionNumber = (0, 0, 6, 2)  
uFileInfoSize = 512  
lActualEpisodes = 16  
uFileStartDate = 20171005  
uFileStartTimeMS = 52966899  
uStopwatchTime = 8379  
nFileType = 1  
nDataFormat = 0  
nSimultaneousScan = 1  
nCRCEnable = 0  
uFileCRC = 0  
FileGUID = 813622370  
unknown1 = 1101957764  
unknown2 = 3041560705  
unknown3 = 3819584183  
uCreatorVersion = 168230915  
uCreatorNameIndex = 1  
uModifierVersion = 0  
uModifierNameIndex = 0  
uProtocolPathIndex = 2
```

Section Map

```
ProtocolSection = (1, 512, 1)  
ADCSection = (2, 128, 1)  
DACSection = (3, 256, 8)  
EpochSection = (8, 32, 5)  
ADCPerDACSection = (0, 0, 0)  
EpochPerDACSection = (7, 48, 5)  
UserListSection = (0, 0, 0)  
StatsRegionSection = (9, 128, 1)  
MathSection = (0, 0, 0)  
StringsSection = (10, 194, 20)  
DataSection = (13, 2, 960000)  
TagSection = (0, 0, 0)  
ScopeSection = (11, 769, 1)  
DeltaSection = (0, 0, 0)  
VoiceTagSection = (0, 0, 0)  
SynchArraySection = (3763, 8, 16)  
AnnotationSection = (0, 0, 0)  
StatsSection = (0, 0, 0)
```

ProtocolSection

```
nOperationMode = 5  
fADCSequenceInterval = 50.0  
bEnableFileCompression = 0  
sUnused = b'\x00\x00\x00'  
uFileCompressionRatio = 1  
fSynchTimeUnit = 12.5  
fSecondsPerRun = 7200.0  
lNumSamplesPerEpisode = 60000  
lPreTriggerSamples = 20  
lEpisodesPerRun = 21  
lRunsPerTrial = 1  
lNumberOfTrials = 1  
nAveragingMode = 0  
nUndoRunCount = 0  
nFirstEpisodeInRun = 0  
fTriggerThreshold = 0.0
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```
nTriggerSource = -3
nTriggerAction = 0
nTriggerPolarity = 0
fScopeOutputInterval = 0.0
fEpisodeStartToStart = 0.0
fRunStartToStart = 0.0
lAverageCount = 1
fTrialStartToStart = 0.0
nAutoTriggerStrategy = 1
fFirstRunDelayS = 0.0
nChannelStatsStrategy = 0
lSamplesPerTrace = 40000
lStartDisplayNum = 0
lFinishDisplayNum = 60000
nShowPNRawData = 0
fStatisticsPeriod = 1.0
lStatisticsMeasurements = 5
nStatisticsSaveStrategy = 0
fADCRange = 10.0
fDACRange = 10.0
lADCResolution = 32768
lDACResolution = 32768
nExperimentType = 2
nManualInfoStrategy = 1
nCommentsEnable = 0
lFileCommentIndex = 0
nAutoAnalyseEnable = 1
nSignalType = 0
nDigitalEnable = 0
nActiveDACChannel = 0
nDigitalHolding = 0
nDigitalInterEpisode = 0
nDigitalDACChannel = 0
nDigitalTrainActiveLogic = 1
nStatsEnable = 1
nStatisticsClearStrategy = 1
nLevelHysteresis = 64
lTimeHysteresis = 1
nAllowExternalTags = 0
nAverageAlgorithm = 0
fAverageWeighting = 0.10000000149011612
nUndoPromptStrategy = 0
nTrialTriggerSource = -1
nStatisticsDisplayStrategy = 0
nExternalTagType = 2
nScopeTriggerOut = 0
nLTPTType = 0
nAlternateDACOutputState = 0
nAlternateDigitalOutputState = 0
fCellID = (0.0, 0.0, 0.0)
nDigitizerADCs = 16
nDigitizerDACs = 4
nDigitizerTotalDigitalOuts = 16
nDigitizerSynchDigitalOuts = 8
nDigitizerType = 6
```

ADCSection

```
nADCNum = 0
nTelegraphEnable = 1
nTelegraphInstrument = 24
fTelegraphAdditGain = 1.0
fTelegraphFilter = 10000.0
fTelegraphMembraneCap = 0.0
nTelegraphMode = 1
```

```
fTelegraphAccessResistance = 0.0
nADCPtoLChannelMap = 0
nADCSamplingSeq = 0
fADCPProgrammableGain = 1.0
fADCDisplayAmplification = 12.307504653930664
fADCDisplayOffset = -21.75
fInstrumentScaleFactor = 0.009999999776482582
fInstrumentOffset = 0.0
fSignalGain = 1.0
fSignalOffset = 0.0
fSignalLowpassFilter = 5000.0
fSignalHighpassFilter = 1.0
nLowpassFilterType = 0
nHighpassFilterType = 0
fPostProcessLowpassFilter = 100000.0
nPostProcessLowpassFilterType = b'\x00'
bEnabledDuringPN = 0
nStatsChannelPolarity = 1
lADCChannelNameIndex = 3
lADCUnitsIndex = 4
```

DACSection

```
nDACNum = [0, 1, 2, 3, 4, 5, 6, 7, 0, 0, 0, 0, 0]
nTelegraphDACScaleFactorEnable = [1, 0, 0, 0, 0, 0, 0, 0, 0]
fInstrumentHoldingLevel = [0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0]
fDACScaleFactor = [400.0, 20.0, 20.0, 20.0, 20.0, 20.0, 20.0, 20.0]
fDACHoldingLevel = [0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0]
fDACCalibrationFactor = [1.0008957386016846, 1.0010067224502563, 1.000895619392395,
1.0008400678634644, 1.0, 1.0, 1.0, 1.0]
fDACCalibrationOffset = [0.0, -2.0, -3.0, 2.0, 0.0, 0.0, 0.0, 0.0]
lDACChannelNameIndex = [5, 7, 9, 11, 13, 15, 17, 19]
lDACChannelUnitsIndex = [6, 8, 10, 12, 14, 16, 18, 20]
lDACFilePtr = [0, 0, 0, 0, 0, 0, 0, 0]
lDACFileNumEpisodes = [0, 0, 0, 0, 0, 0, 0, 0]
nWaveformEnable = [1, 0, 0, 0, 0, 0, 0, 0]
nWaveformSource = [1, 1, 1, 1, 0, 0, 0, 0]
nInterEpisodeLevel = [0, 0, 0, 0, 0, 0, 0, 0]
fDACFileScale = [1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0]
fDACFileOffset = [0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0]
lDACFileEpisodeNum = [0, 0, 0, 0, 0, 0, 0, 0]
nDACFileADCNum = [0, 0, 0, 0, 0, 0, 0, 0]
nConditEnable = [0, 0, 0, 0, 0, 0, 0, 0]
lConditNumPulses = [1, 0, 0, 0, 0, 0, 0, 0]
fBaselineDuration = [1.0, 1.0, 1.0, 1.0, 0.0, 0.0, 0.0, 0.0]
fBaselineLevel = [0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0]
fStepDuration = [1.0, 1.0, 1.0, 1.0, 0.0, 0.0, 0.0, 0.0]
fStepLevel = [0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0]
fPostTrainPeriod = [10.0, 10.0, 10.0, 10.0, 10.0, 10.0, 10.0, 10.0]
fPostTrainLevel = [0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0]
nMembTestEnable = [0, 0, 0, 0, 0, 0, 0, 0]
nLeakSubtractType = [0, 0, 0, 0, 0, 0, 0, 0]
nPNPolarity = [1, 1, 1, 1, 1, 1, 1, 1]
fPNHoldingLevel = [0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0]
nPNumADCChannels = [0, 0, 0, 0, 0, 0, 0, 0]
nPPosition = [0, 0, 0, 0, 0, 0, 0, 0]
nPNumPulses = [4, 4, 4, 4, 4, 4, 4, 4]
fPNSettlingTime = [100.0, 100.0, 100.0, 100.0, 100.0, 100.0, 100.0, 100.0]
fPNInterpulse = [0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0]
nLTPUsageOfDAC = [0, 0, 0, 0, 0, 0, 0, 0]
nLTPPresynapticPulses = [0, 0, 0, 0, 0, 0, 0, 0]
lDACFilePathIndex = [0, 0, 0, 0, 0, 0, 0, 0]
fMembTestPreSettlingTimeMS = [100.0, 100.0, 100.0, 100.0, 100.0, 100.0, 100.0, 100.0]
fMembTestPostSettlingTimeMS = [100.0, 100.0, 100.0, 100.0, 100.0, 100.0, 100.0, 100.0]
nLeakSubtractADCIndex = [0, 0, 0, 0, 0, 0, 0, 0]
```

EpochPerDACSection

```
nEpochNum = [0, 1, 2, 3, 4, 0, 1, 2, 3, 4]
nEpochType = [1, 1, 1, 1, 1]
fEpochInitLevel = [0.0, -50.0, 0.0, -50.0, -50.0]
fEpochLevelInc = [0.0, 10.0, 0.0, 0.0, 10.0]
lEpochInitDuration = [2000, 10000, 10000, 10000, 10000]
lEpochDurationInc = [0, 0, 0, 0, 0]
lEpochPulsePeriod = [0, 0, 0, 0, 0]
lEpochPulseWidth = [0, 0, 0, 0, 0]
```

EpochSection

```
nEpochDigitalOutput = [0, 0, 0, 0, 0]
```

TagSection

Extras

```
abfFilename = C:\Users\scott\Documents\GitHub\pyABF\data\17o05028_ic_steps.abf
abfID = 17o05028_ic_steps
abfDatetime = 2017-01-05 14:52:46.899000
dataByteStart = 6656
timeSecPerPoint = 5e-05
timePointPerSec = 20000.0
rate = 20000.0
sweepPointCount = 60000
sweepLengthSec = 3.0
sweepCount = 16
signalScale = 0.032768
gain = 1.0
mode = IC
units = mV
unitsCommand = pA
filterKHz = 10.0
commandHoldingByDAC = [0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0]
```